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Journal of Home Economics

PAGING NEW IDEAS

BEATRICE SAWYER ROSSELL

FASCINATING questions about the home rise in the minds of home economics teachers. When, for example, was the first formal dinner? What is the life history of familiar friends of the sewing basket, such as scissors, a needle, a pin? The public library frequently supplies the answer.

One teacher who was asked to speak before a woman's club on "The History of the Formal Dinner" traced that meal back to the days of the cave man when the only light was the flicker of the fire and the table itself was a smooth flat rock. With the help of her public library she discovered that Cleopatra had one of the most luxurious dinner tables of all times—lapis lazuli and gold—and that Roman emperors entertained their guests at ivory tables inlaid with gold. She traced the history of foods served at a formal dinner through the period when Catherine de Medici introduced Italian foods into France, fine French cookery had its birth, and Elizabeth of England made English cookery popular. Finally, she brought her audience over to America, seated them in imagination at colonial tables, brought in one of the most brilliant of early hostesses, Dolly Madison, carried them forward to a dinner in the gay nineties, and finally—with the aid of local dealers in household furnishings—showed a formal dinner table of today complete to the most minute detail.

The history of today's sewing tools is not very easy to discover, but a teacher of home economics in a large city high school was curious as to their ancestry and questioned her local librarian. Much to her delight the librarian produced not only what she was seeking but in Longman's *Pins and Pincushions* more than she had thought to ask for.

Many alluring trails are followed by teachers and students of home economics where good library service is available. Some lead far, far back into the past; others explore the present; still others project into the future.

In Indianapolis, research in the fine art of homemaking is made easier, perhaps, than anywhere else in the United States because of the Julia Connor Thompson Memorial collection of books on home building, interior decoration, furniture, gardening, and the arts and crafts of the home. This collection, given to the public library by Mr. Charles H. Thompson in memory of his wife, is a boon, not only to teachers but to homemakers, research students, and all types of people whose interests for one reason or another center in the home.

A university extension teacher, for example, who gives part of her time to work in one of the big Indianapolis department stores told me recently that when the Federal Housing Administration was launching its program in that city the public library

prepared at her request a reading list entitled "Modernizing the Home," listing books which would help people interested in remodeling, repairing, or refinishing a house. The list was used not only in the store but was given away at the model house which the F.H.A. constructed. When a course for waitresses was undertaken, this same teacher got books which taught the care of fabrics, polishing of metals, and so forth. Salespeople under instruction were supplied with reading lists on personality and dress, wearing apparel, fashions, rugs, floor coverings, and many other subjects. A university extension class studying interior decoration met in the library where the Thompson collection is housed and thus became enthusiastic users of material they had hitherto not realized existed.

Teachers in Indianapolis have not only the Thompson collection to aid them but a special teachers' division of the public library. Here they have magazines as well as books available, the JOURNAL OF HOME ECONOMICS incidentally being among the magazines constantly in use. Curriculum committees meet in the library where courses of study as well as materials to implement them are provided. A teacher suddenly called on to costume a play at once gets in touch with the library. Another, teaching girls who spend part of their time caring for children, has had the librarian visit the school to suggest books to read to small children and picture books which will entertain them. A teacher or student with a research problem or one simply "paging a new idea" turns with equal confidence to this friend in need.

From the child's rather than the teacher's point of view the fine art of homemaking can become a joyous affair, with the aid of the library, as early as the primary grades. Books on modeling, *Art Adventures with Discarded Materials*, furniture making, and toy making help them to build a model house as one of their earliest projects. Later readers such as *Bobby and Betty at Home*, and the Home and World Series on *How We Are Sheltered*, *How the World Is Housed*, and *How the World Is Fed* give them glimpses of home life not only in their own country but in many countries abroad. Health habits are taught indirectly as a rule, teachers using the books and guiding the children with the aid of visual as well as printed materials. Character building and good citizenship are by no means the least important aspects of child development with which the library lends a generous hand.

Last year more than 400,000 books in all were sent to schools by one large city library. In addition, 58,000 boxes and packages of visual aids were lent, most of the material going to schools. Exhibits on cotton, coffee, or rice growing; films showing the silk industry or meat packing; slides, posters, or stereographs on tableware, refrigeration of foods, and dairying, were among the materials lent.

The art of homemaking can be not only easy but delightful to teach where a good library comes to the rescue. Unfortunately, teachers in thousands of communities have either poor library service or no library service at all.

Surprising as it may seem, 45 million people in the United States are entirely without access to a local public library. More than 1,000 counties have no public library within their borders. Most of the people without libraries, as might be imagined, are in the rural areas, only 12 per cent living in urban areas, while 88 per cent are in the country.

Fortunately, many states have good state library service which enables people in need of books to secure them even if a local library is poor or lacking. In Indiana, for example, the state leader of home demonstration agents always consults the chief of the loan division of the state library before

preparing her club program. Together they work up a reading list which the home demonstration leader suggests to clubs throughout the state. On this list are such books as Abel's *Successful Family Life on a Moderate Income*, Frederick's *Mrs. Consumer*, Post's *Personality of a House*, De Schweinitz's *Growing Up*. A few biographies and novels are listed, as well as such magazines as the JOURNAL OF HOME ECONOMICS, *Better Homes & Gardens*, *Arts and Decoration*, and *Hygeia*.

Any of the books listed may be borrowed from the state library, the size of a collection sent a club depending on the number of club members. Some of these groups become centers for general library service in their communities, and in more than one instance have been responsible for establishing library service with permanent tax support.

Even good state libraries cannot begin to meet the demands made upon them, however, and many states have service which is admittedly inadequate or lacking.

To solve this problem is the present effort of the American Library Association, state library associations and agencies, and citizens' library committees. Last year a National Plan for Library Service was worked out by a planning committee of the national association and indorsed by the A.L.A. Council. Its chief recommendations are:

Large units of library administration, which would be economical as well as efficient, each system of libraries to serve a metropolitan area, a large county or a region including several counties, through convenient distributing points

State aid for both public and school libraries

Certification of librarians by state legislation

Close coordination of university and other large libraries to provide better service for research students

Federal leadership in library development

To teachers who know how impossible it would be to provide really equal school service for rural and urban children in the United States with purely local support, the recommendation for state aid is probably not surprising. Federal aid will also be needed, in the opinion of many library leaders, if states such as Arkansas and Mississippi, with less than $200 per capita income, are to offer library service equal to that procurable in California or New York, with more than $500 per capita income.

A federal library agency in the United States Office of Education, which would do for libraries what the Office of Education now does for schools, has been indorsed by Commissioner Studebaker as well as by the American Library Association.

State aid to the amount of $600,000 was appropriated for public libraries in Illinois at the last session of the state legislature and $100,000 in Ohio. Some of the other state library planning committees will probably seek aid at legislative sessions beginning in January.

Readers of the JOURNAL OF HOME ECONOMICS who want good library service and lack it can do something toward securing it by writing to their representatives in the legislature if and when library bills seeking state aid are introduced by state library committees. They can also write their state library agencies (usually located at the state capital) for assistance and advice if their need for library materials is immediate. Organized cooperation can be developed between state home economics associations and state library agencies, looking toward state-wide programs. Anyone interested in establishing a library or strengthening an existing one can obtain help from the state library agency or, failing that, the American Library Association, 520 North Michigan Avenue, Chicago.

THE SCHOOL LUNCH SURVEY IN MASSACHUSETTS

HELEN INMAN DUFF

EVIDENCE of a growing interest in the noon meal of school children has been recently shown in Massachusetts by the cooperative way in which members of the Federation of Women's Clubs, Red Cross chapters, Selectmen's Association, Consumers' League, American Legion, Boy Scouts, as well as the Departments of Education and Extension, have actively worked with the Department of Health on a school lunch survey and the improvement of school lunches in the state.

The survey was made primarily to find out if there was need for providing better lunches, and secondly to get all the interested people working more closely together to meet the needs as found. Dr. Chadwick, Commissioner of Public Health, after conferring with members of the different groups, appointed a special committee with Mrs. William Piper of the child welfare division of the Massachusetts Federation of Women's Clubs as chairman. With their help information has been collected regarding actual conditions and practices and ways of improving these have been devised and adopted.

One hundred and sixteen towns and cities have replied to date, representing 402 schools—about 35 per cent of the total school population. Of these communities, 32 have definitely been helped with their problems by the Public Health Department and the cooperating organizations.

The communities needing the most service were found to be the small ones in which the lunchroom was managed by an untrained person, often working with the backing of a club or other group. The larger lunchrooms were usually under the direction of a trained person alert to newer developments in nutrition, but the small lunchrooms needed much in the way of suggestions along these lines. Examples of the services given in actual towns are:

Menus; organization of lunchroom; talks to parents; talks to children in classrooms

Talks to parents; talks to children; mimeographed recipes to use for lunch boxes put up at home; drive to raise funds for introduction of hot dish at school lunch

Improvement of lunchroom; education to sell more protective foods; talk to parents; suggested rivals for candy in lunchroom

Talk to teachers on protective foods; lunch-counter reorganization

Consultation with school committee on efficient types of cafeteria equipment

In returning the survey card a small Berkshire town in which the school lunch was sponsored and managed by a local P.-T.A. asked for suggestions. The nutritionist employed by the Department of Health to aid the cities and towns with school lunch problems met with the committee to make out well-balanced, low-cost menus, for the universal question of finances must be considered here as well as in larger lunchrooms. This committee met in the early fall at the home of the president of the P.-T.A. to plan menus for the months from November to April, the operating time of the lunchroom. A special effort was made by the committee to work into the menu more raw vegetables and other protective foods, and so even in this little town tucked away in the hills of western Massachusetts the newer trends in child feeding are spreading through education. Although fresh raw vegetable salads had

been served the previous year, the children had refused them because they lacked "eye-appeal." With this in mind one of the members of the committee, a very good cook, made a special effort to prepare the cole slaw herself on several occasions. Eye-appeal sold these salads. The next were sold by "taste-appeal" and in this connection it should be remembered that successful lunchroom managers agree that each dish should be tasted individually to be sure it is seasoned to suit the public. Though interested townspeople have helped by occasionally donating home-canned and raw vegetables, a quart of cream, a few pounds of homemade butter, and fruit such as apples, this small lunchroom was put on a paying basis mainly by careful, wholesale buying and the elimination of waste. The waste problem was controlled by the following system. On Friday of each week the students bought tickets for the following week, thus giving an idea of the total number of lunches to be served. The teachers cooperated in taking care of these tickets and in sending a daily list of absentees to the lunchroom. The number of pupils averaged about sixty, each spending ten cents. This allowed for a lunch something like the following: creamed chipped beef on whole wheat toast, buttered carrots, two slices of whole wheat bread and butter, raspberry jello with whipped cream. In addition, a glass of milk could be obtained for three cents, making the total cost thirteen cents.

As an outgrowth of cases similar to this, a series of menus, market orders, and recipes for three weeks each were prepared to aid an untrained person in providing luncheons for from twenty-five to one hundred people. Different ones were made for autumn, winter, and spring; and each luncheon was planned to sell for about fifteen cents complete or five cents a dish, which was the average amount of money spent per child as shown by the survey.

In many communities the scarcity of money prohibits the child from spending even fifteen cents for a lunch, and the survey cards have shown a decided increase in the number of lunches brought from home. This made it urgent to give this group help and guidance in their choice of food similar to that which the lunchroom manager gives to the children who buy their food at the school. Many organizations have done excellent work along this line. Home demonstration agents have shown mothers the art of packing good lunches. Women's clubs have also sponsored meetings for mothers where a nutritionist has discussed with them the value of protective foods for growing children.

Many successful baits have been used to interest the parents in these meetings. Refreshments are always one, so at such a meeting the Parent-Teachers Club ingeniously served dark bread sandwiches with fillings of raw chopped vegetables, cream cheese and pineapple, raw chopped spinach creamed with butter, oatmeal cookies, and a bottle of milk. These fillings and cookies proved to be so popular that the recipes were written on the blackboard for the mothers to copy.

A mothers' club that wished to interest the townspeople in starting a hot lunch project at a consolidated school devised a very popular bait—they served free of charge a typical home-baked supper. Due to the fame of the women as cooks, ninety people attended and were most enthusiastic about the project, which was successfully carried out this past year.

Even in larger cities, interested lunchroom managers have served cafeteria suppers to the parents. This provides a valuable opportunity to judge the kind and prices of the foods available to the children at noontime. The newspapers are still another means which lunchroom managers have used to acquaint the homes with happenings in the lunchroom.

The survey indicated that handwashing before lunch was often a bit of a problem, but a small country school solved this in a homey way. In the center of the one-room schoolhouse a wood-burning stove kept a kettle of water boiling merrily all morning, while nearby a bottle corked with a perforated stopper held liquid soap ready for use at a moment's notice. At noontime the children washed their hands in tin basins set on wooden benches and then dried them on paper towels. One child had charge of shaking on the soap, another of distributing the paper towels (to prevent waste), and a third cared for the basins.

Dingy basement lunchrooms have been another frequent problem, and one which the children have taken an active part in correcting. Architects often neglect to provide a special room for this purpose, despite the fact that many children are known to eat their lunches at school. In one town there had been complaints about a basement room which was used by the children as a lunchroom. The room was very clean with its slate-grey walls and floors, but rather gloomy looking. Spurred to action by pressure brought to bear through these complaints the superintendent made plans to brighten this room. Two talented high school art students were selected to paint scenes on the grey background in gay colors, while light pongee curtains were hung at the windows, and little green potted plants on lace paper doilees were purchased for the tables. As usual, the cheerful surroundings accomplished wonders in keeping the pupils from bolting their lunch to rush out to play.

Student education for better food selection is an important part of the program, and here the pupils themselves can accomplish the most. In a small town near Cape Cod the senior students had a time-honored custom of selling sweet crackers and candy to earn enough money for either a class trip or a duck dinner. Moreover, no dark bread was used in the lunches provided at the school; and because of lack of demand, none was sold in the local stores. The attack then was to interest the senior home economics girls in a project of making and selling dark bread sandwiches and hot soup at lunch time instead of the sweet crackers and candy. As a first step, the home economics classes cooperated by making several kinds of dark breads; samples of these were given to the students; and the most popular ones were chosen for the sandwiches.

With the children, the community organizations, and the parents showing a growing interest, what has been done to call the attention of school committee members to undesirable lunchroom conditions? Miss Mary Spalding, the consultant in nutrition in the State Department of Public Health, was invited by the Massachusetts Department of Education to present some problems of the school lunch at school committee meetings, at the teachers colleges in Worcester, Westfield, North Adams, Salem, and East Bridgewater. Superintendents and committee members were told how few children were getting good food value for their money. The gentlemen in return asked such vital questions as: "What is the legal method of financing the lunchroom?" "Could a simple, inexpensive unit be developed that would act as a thermostat for an electric oven to keep the temperature at 150°F?" "Upon what organizations may we call to receive help with lunches for needy pupils?" Then, too, there were questions about the testing of foods for bacterial count before using in the lunchroom.

Last but most important factor in the successful lunchroom is the manager, be she trained or untrained. This year for the first time she has been given an opportunity to meet with other managers to discuss mutual problems. As a beginning the Massachusetts Department of Public Health sponsored two school-lunch panel

discussions. The first was held in Boston with an attendance of 121, including lunchroom managers, home economics teachers, school superintendents, a representative from the Welfare Department, two representatives from the League of Women Voters, and a member of a school committee. The second was in Springfield with an attendance of 49. At these meetings the managers stated their problems, which were discussed by members of the panel and other lunchroom managers. There was also excellent discussion from the floor. All were eager for help or to help one another.

From these two panels and from questionnaires sent to all lunchrooms, a week's conference on "Progress in School Lunches" was planned for the lunchroom managers at Fitchburg State Teachers College summer school. This was made possible through the cooperation of the Department of Education. The usual problems were brought up for solution: nutrition education, the insistent need of better business methods of accounting, buying and selling to adjust prices to the constant changing of the present day's market and to the child's pocketbook, free lunches for needy children, wages, and hours of service. These were discussed by the twenty-three managers who attended the conference from as many different cities and towns. There was a general feeling at the close of the conference that although there has been some improvement in the last ten years, the need of nutrition education as part of the school curriculum is just in its infancy.

During the last year the Department of Public Health has sent out various bulletins, papers, posters, and other lunchroom helps for teachers, lunchroom managers, school principals and superintendents, nurses, and community organizations. It has also arranged for radio talks and newspaper and magazine articles to increase general interest in and understanding of the school lunch program.

The underlying reason for this growing interest in better school lunches is, of course, the fact that under present economic conditions many children need a good noon lunch at school to insure adequate protection. Now is the time to capitalize on this need and to arouse permanent community interest in good lunches for school children.

THE NATIONAL HOUSING ACT

FLORENCE JONES VINING

THE National Housing Act reaches deep into the problem of new home construction through its mutual mortgage insurance plan which aims to provide home owners of the nation with a more economical, dependable, and sounder source of mortgage credit.

It is designed to bring the home financing system of the country out of its chaotic state and to restore it on an improved basis, able to meet the legitimate demands of the borrowing public. Through the mutual mortgage insurance plan, it is aiding in the revival of home building activity so essential to the recovery program.

The distinguishing feature of the plan, which places it in a class apart from the mortgage guarantees of the past, is the provision that claims against the mutual mortgage insurance fund will be paid to the financing agent in debenture bonds, bearing interest at the rate of three per cent per annum, payable semi-annually. These debenture bonds are guaranteed as to principal and interest by the United States government.

The mutual mortgage insurance plan provides that a mortgage may be made for a principal amount not exceeding $16,000 and may be made for 80 per cent of the appraised value of the property, as of the date the mortgage is executed.

Underwriting offices in every state have been established to handle the system. Through this system the prospective home owner receives substantial protection against mistakes in judgment which are likely to be made by one inexperienced in buying a home or site or in building a home.

In applying for the loan he is obliged, first of all, to review his own financial situation and the probable expenses of carrying his home. If a commitment to insure his loan is made by the Federal Housing Administration, the applicant will be assured that one or more men of long experience and impartial attitude have concluded that he is not attempting a transaction obviously beyond his means.

The value of a property is determined by the characteristics of the neighborhood in which it is located and the fitness of the property to the neighborhood as well as by the characteristics of the property itself.

Zoning regulations and their enforcement and proper deed restrictions are important factors in consideration of property value. The Federal Housing Administration seeks stability and recognizes those factors which prolong the useful existence of a residential neighborhood as essential to the stability of individual residential properties. Requirements of this kind are:

The neighborhood shall offer reasonable security against decline in desirability for residential purposes due to the encroachment of inharmonious land uses, such as commercial or industrial occupancies.

The absence of appropriately drawn and adequately enforced zoning regulations or private restrictions when constituting unquestionable major hazards, shall be deemed sufficient cause for rejection of an application for a loan.

A property must also be in harmony with neighboring properties as to physical condition, type, and design. That is, a bungalow surrounded by apartment houses or an apartment building in a neighborhood of detached houses, unless the trend is definitely toward the type under consideration, would be a questionable risk.

The replacement cost of the building shall not

greatly exceed that of other buildings in the neighborhood and the quality of building materials, construction equipment, and finish shall meet standards set by other buildings in the neighborhood.

Once the plan comes into widespread operation, the following results may reasonably be anticipated:

Persons whose savings funds are intrusted to banks, building and loan associations, and insurance companies will have added security behind their funds.

Purchase of homes at inflated values will be discouraged. This will exert a powerful influence against speculative booms in real estate, with consequent conservation of values in the investment of all owners of homes and other small properties.

Jerry-building will be discouraged. Houses that do not measure up to quality standards set by the Federal Housing Administration will find a less ready market.

Improvement in subdivision layouts should be a result. Subdivisions that are regarded as specially good by the Federal Housing Administration will receive more favorable rating.

Stability should increase from year to year in the volume of home construction, with consequent greater stability in employment in the building trades and in the building-material manufacturing industries.

A general public advantage should arise from the discouragement of vast numbers of "shoestring" purchases of homes, fewer home owners in financial difficulties during such temporary periods of unemployment as may reoccur in the future, and greater stability in our banks and savings institutions.

When the National Housing Act was passed by Congress in June 1934, there were on the one hand home owners who were allowing properties to fall into disrepair and were failing to keep them up to date in convenience, livability, and attractiveness. On the other hand stood unemployed workers in the building trades, the lumber industry, manufacture of brick, transportation and allied industries; plants were idle or running only part time among virtually all of the heavy industries. The normal channels of credit needed reopening to assist in bringing about a revival of repair work and new building after several years of lowered activity.

Better housing programs sponsored by the Federal Housing Administration now are in effect in around 7,259 communities in all sections of the country. House-to-house canvasses are being made. These programs are devised to make known to and impress upon home and other property owners the fact that funds for repair and modernization are available at low cost repayable in periodic installments. These funds may be obtained from local financial institutions. The Federal Housing Administration lends no money.

Local better housing programs encourage all property holders to make careful inspection of their building and grounds in order to determine what repair and upkeep is required to keep them from rapid deterioration and what improvements they would like to make and can reasonably afford. The reservoir of work to be tapped in this way is of immense volume. Many property owners are using their own money to make desired improvements to their properties.

The third function of the nation-wide better housing program is to bring about an accompanying rebirth of sales and production activity in the building and allied industries in an effort to increase employment, decrease the burden of the public rolls, and generally tone up business.

Modernization credit funds are obtainable from banks and other financial institutions which are insured by the Federal Housing Administration against loss up to 20 per cent of the total amount advanced. The notes extend from one to five years in amounts up to $2,000 for individual homes and certain other types of property.

Recently the National Housing Act was amended to cover advances of credit in excess of $2,000 but not in excess of $50,000 to be used for (1) repair, alteration, or improvement of real property already im-

proved by or to be converted into apartment or multiple-family houses; hotels; office, business, or other commercial buildings; hospitals; orphanages; colleges; schools; or manufacturing or industrial plants, or (2) the purchase and installation in connection with the foregoing types of property of equipment and machinery provided they are "peculiarly adapted to the business conducted therein or necessary to the operation thereof." This amendment opens the doors of credit to industrial and commercial plans for modernization and repair.

THE HOME ECONOMICS RADIO TALK

Pointers on Script Writing, Program Planning, and Broadcasting

"Spoken writing," as someone has characterized the radio talk, demands a technic of its own different from the technic of writing for print, different even from that of the speech made face to face with an audience. Some of the colleges are giving courses on radio writing and broadcasting. But for the most part, home economists and all the others called on to give radio talks are doing so without benefit of formal instruction or even the friendly advice of an experienced broadcaster.

Appeals have come to the Journal and to the radio committee of the Association for pointers that will help students and full-fledged home economists to present home economics material effectively on the air. The committee has assembled the three following papers representing the point of view of a commercial broadcasting company, a state college that gives daily programs over its own station and has successfully developed radio clubs among the women of the state, and the radio service of a government department. A few references to printed and mimeographed material are appended.

All three of these papers emphasize the same point—the friendly, informal style essential to a good home economics talk. Though the radio was then undreamed of, Robert Louis Stevenson might have been writing of such a broadcast when he said: "The first duty of man is to speak; that is his chief business in this world. . . . . It costs nothing in money; it is all profit; it completes our education, founds and fosters our friendships, and can be enjoyed at any age and in almost any state of health."—Ruth Van Deman, *Chairman, Committee on Home Economics in Education by Radio.*

EGG BEATERS ON THE AIR

JUDITH C. WALLER

Do you remember those first miraculous days when we used to gather at the home of some friend who had a crystal radio set to listen enthralled, as our turn at the headset came, to music or the sound of a human voice being literally materialized out of thin air? We found ourselves a little aghast at science in those days, wondering vaguely what the world was coming to. And then through the march of years in which the tiny crystal sets grew into still more miraculous loud-speakers, we suddenly seemed to be taking radio as a matter of course—a part of our daily routine. How much it has become a part of our daily life we realize fully these days only when something goes wrong with our sets and we find ourselves cut off from easy communication with the rest of the world.

Nowadays, the housewife turns on the radio the first thing in the morning for five-minute time signals to tell her husband of the very minute he should depart for work and to urge her children to hasten the eating of their cereal lest they be late to school; to give her stimulating music which will follow her upstairs as she makes the beds; and to send the voice of her favorite cooking adviser out loudly enough to summon her back with pencil and paper to make notes.

In just a few years the average woman has learned to turn more and more to the radio for interesting information about her important career as homemaker. When the daily problem of "what to have for dinner"—a problem that usually comes just

after breakfast when there is no sharp appetite to act as prompter—she turns on the radio for inspiration. By a slight twist of her radio dial, she can listen to reports on the best buys in the day's market; she can keep posted on the best time to start putting up that raspberry jam her husband is so fond of; she will know the very day the first watermelons appear in the market.

And in those few years home economists specializing in radio broadcasting have made great changes in their technic. The days of going on the air with no more preparation than a vague idea of "ad-libbing" for fifteen minutes about "delicious summer-time salads," and turning at random through a note-book of recipes for one or two that can be hurriedly read off to fill out that last minute and a half before time to sign off—are definitely over. In the early days of radio it was not unusual for a housewife to hear the broadcaster suddenly announce that now she would give a recipe for such-and-such a dish, and before the listener could find pencil and paper the recipe was almost completed. Of course, it was the custom to repeat the instructions, but often at such a rapid gait the housewife could only scribble out a series of abbreviated notes which she herself couldn't figure out later.

Yes, those days are over. Now the home economics expert goes into her radio kitchen only after a great deal of preparation for each broadcast. She has spent hours at her desk studying fan mail—her only way of checking on her audience's reactions. She has read every letter carefully, considering suggestions, weighing requests, endeavoring to make sure she is giving her listeners the type of thing they want most. And then she has gone into her own testing kitchen, to try out recipes and to rehearse her broadcasts, doing the same things which she will later do on the air. True, she will not want to detract from the informality of her talk with thousands of unseen listeners by preparing a script to be read—but she will make copious notes to guide her as she "ad-libs," and she will run through her material at least once for timing.

Today the most successful technic for use in broadcasting home economics programs is that of actual demonstration—the actual making up of recipes, through as many steps as possible, right before the microphone. I have been a guest in the studio of a very successful broadcaster using this technic and have noted the devices she employs to keep her demonstration moving; for on the air every split second must be filled and not with groping "and . . . a . . . er . . . uh" meaningless conjunctives. She has a worktable placed before the microphone, and with her bowls, spoons, measuring cups, ingredients, her notes, and her assistant, she is ready to say, "Good morning, ladies."

The assistant often plays a most important part in keeping the demonstration moving, for she can take charge of some of the less important steps in the demonstration. For example, after the broadcaster has measured her ingredients, explaining each step in detail as she goes along, she will say to her helper, "Now, Julia, while I'm creaming the butter, you beat the whites of two eggs for me"; and while she continues explaining the importance of having the butter and sugar mixed to just a certain consistency, the whir of the egg beater joins in with the rhythmic beats of a wooden spoon against the mixing bowl. Incidentally, home economists are fortunate in having their "sound effects" come out faithfully over the loud-speakers. In a studio, an automobile door being slammed shut in front of a microphone may sound like an explosion of TNT and thus require some ingenuity on the part of a sound man when he finds "Business: Slam car door" written in a dramatic script; but an egg beater being turned before a microphone sounds exactly like an egg beater.

Yes, the actual demonstration of the

making up of recipes comes out realistically over the air, and when done by a good broadcaster each step in the demonstration will be followed just as clearly by an unseeing audience as by a group of women seated before her in the studio. That qualification *good*, is the catch. It embodies a pleasing voice, a personality that will be projected strongly over the air, enough of the sense of drama and news to provide an accurate guide to what makes interesting material and how it can be presented.

At a recent discussion on radio technics as applied to schoolroom reception a record of a geography lesson was played for criticism along with a number of other records. Everything was wrong with the geography broadcast. The broadcaster had a dull, monotonous voice, an uninteresting, pedantic way of presenting his material. And the material itself could not have been chosen with any regard for holding the attention of the listeners. It was, indeed, a lot of bare facts strung together in a stupid manner. There was no question that the facts were authentic; the broadcaster had been a teacher in the public schools for years. But I never could be convinced that he had been an interesting teacher of geography—a man who could vitalize his subject so as to make the places he was describing real, living places and not just names on a map.

When these criticisms of the record were made, one member of the listening group protested immediately, making the statement that the broadcaster was a most successful teacher of geography and that at least 40,000 children listened to him eagerly every week. How often we delude ourselves into believing statements of this kind! How did that director really know 40,000 children in school listened "eagerly" to that broadcaster? Were they ever given a choice of programs to listen to? Certainly not. The teacher in the classroom undoubtedly said, "It is now time for our radio geography lesson. You must all sit quietly and listen to every word that comes to you from the loud-speaker, as we want to write a paper on what we hear and send it in to Mr. Smith at the end of the broadcast so he will know we were all listening to him and enjoying his program." Then she sat down at her desk in front of the room and watched the children while the radio lesson was being broadcast. She did not say, "There are two broadcasts which we may hear today—both lessons in geography. One is Carveth Wells telling about his recent travels, and the other a talk about Georgia by Mr. Smith. I will let you choose which you would rather hear." Have you any doubt which lesson would be chosen—or remembered longer?

This is merely an example of how prone we have been to think we could take any material prepared for any other medium and transfer it to radio verbatim and find an audience of thousands of listeners eagerly waiting to be thus enlightened. Today we know definitely that radio demands its own technic. We know that schoolroom or lecture platform methods cannot be used successfully in front of the microphone. We do not hold a radio audience by looking it in the eye nor by our very presence. That audience is ear-minded, not eye-minded, and it is the personality of the voice and the method of presentation that are of prime importance in keeping the dials set for our program. Each subject needs its own particular method of presentation. History can be dramatized. So can geography. Social studies can be offered in discussion, at round-table forums, or even as debates.

Of chief importance for anyone venturing out upon the air waves to remember is that radio is primarily an entertainment device. Never forget that. If you would keep your listeners from that easy twist of the wrist which will immediately shut your voice from their ears, make your broadcasts interesting enough to be rated as entertain-

ment. And with this in mind you will find that even the most profound topics of astronomy or political science can be transcribed into terms of such absorbing interest as to hold any listener of average intelligence. Remember, too, that radio is the most intimate form of entertainment to which the public has ever subscribed. By its very nature—bringing human voices right into the listeners' living rooms—broadcasters come to be looked upon very much as old friends dropping in for a visit. A glance through the fan mail of any artist on the air today would show you quickly how many of their listeners extend to them the warmth of real loyal friendship.

It has been said that if we keep three points clearly in mind in preparing any educational broadcast, we shall be successful in getting our message across. They are the same three points which have been stressed throughout the years in the army schools, namely: explanation, demonstration, and imitation.

It is easy to adapt these three points to any home economics radio program. The most successful broadcasters long ago discovered that a simple explanation, followed by a carefully worked out demonstration, will result in an easy imitation by the listeners of the example given. And that, to a home economist on the air, is success!

And so the keynote of any home economist's radio work should be interesting information, informally presented as real entertainment. Almost every housewife is constantly seeking new and stimulating suggestions on the art of cooking; she takes great pride in keeping posted on all that is new in this field. So there's your ready-made audience waiting for you. Give her newsworthy, interesting facts in a friendly, entertaining fashion, and you will reap that tangible reward of the radio broadcaster—thousands of women writing to you for help and suggestions.

KOAC BROADCASTS FOR WOMEN

ZELTA RODENWOLD

To aid Oregon women in their homemaking and to help them in their personal development and community interests, is the aim of the women's programs presented over KOAC, the state-owned broadcasting station at Corvallis. An hour on the air each morning from nine to ten o'clock and a half-hour in the afternoon from three to three-thirty (except Sunday) are devoted to these programs. The director of women's programs for the station devotes full time to developing plans for these broadcasts and presiding over them.

Morning programs deal particularly with homemaking interests. Usually they are informal talks, though occasionally skits and interviews are used. The hour is divided into four units of approximately twelve minutes each, separated by music and station calls. Today's or Tomorrow's Meals, Hows and Whys of Housekeeping, Facts and Fancies, and The Magazine Rack, are the four general divisions of the program. Today's or Tomorrow's Meals deals with meal planning and food preparation. It includes discussions on the selection of seasonal products and their preparation for the table. It emphasizes particularly low-cost meals and concludes with a specific menu suggestion and an occasional recipe that is new and different. Hows and Whys of Housekeeping considers the scientific basis for approved methods of performing housework. It suggests short cuts and inexpensive equipment and gives guidance in good buymanship. Facts and Fancies attempts to counteract current fallacious ideas concerning food values and housekeeping practices. It deals with the application of scientific research to problems of housekeeping. The Magazine Rack reviews briefly or quotes from current magazine articles of unusual merit and helpfulness.

Tuesday is known as question and answer day when practically the entire hour is devoted to answering questions received from listeners. Thursday is known as exchange idea day. On that morning a large portion of the hour is given over to passing on good ideas sent in by Oregon women. These ideas are examined for workability and value, of course, and if found unsound are passed on with suitable comment and explanation.

Saturday morning programs are divided between a half-hour of storytelling for boys and girls and a program called A Half-hour in Good Taste, which deals with good social usage. The latter broadcast is developed and supervised by the director of women's programs and then worked out in detail and presented by the Associated Women Students of Oregon State College. The half-hour presentation is made up of talks, skits that illustrate some point, questions and answers, and music furnished by a student orchestra. The entire period is keyed to high school girls and boys, though we know it holds the interest of adults as well.

In contrast to the informality of the morning chats, the Homemakers' Half Hour in the afternoon deals with topics in a thoroughgoing, rather formal way. This period usually features a guest speaker. As to organization, it is made up of two units usually, one of twenty minutes and one of seven, separated by music. No hard and fast rule as to time is followed in either the morning or afternoon, however, for programs are adapted to the subject matter under consideration, just as any program for any meeting is developed. In fact, these afternoon programs take on something of the atmosphere of a planned program meeting. Again, the director of women's programs presides and introduces the speakers or other program participants, who are invariably specialists in their fields.

Sometimes the theme of the meeting is developed by a playlet, as in the case of the series of programs called Religious Nurture within the Family, presented cooperatively with the department of religion. In such cases, actors are drawn from the KOAC Drama Guild, made up of students of proved dramatic ability. Sometimes the series is turned into a study course, such as the one called Creating Beauty through Home Crafts, presented by a local craft worker who has tapestries on exhibit in the Metropolitan Museum in New York. Weekly study outlines and references go to the 280 homemakers enrolled. Another study course, Fitting Your House to Your Needs, conducted by a home economist with the Oregon Experiment Station, enrolled 223 listeners. This course correlated with the federal housing program.

Each day of the week the afternoon period features a different program. For example, for the fall of 1935 the theme of the Friday broadcasts is Laughing with Ourselves. These philosophical chats by an Oregon writer, treat in a whimsical, inspiring manner with homely, everyday thoughts and happenings of homemakers generally. As do other afternoon programs, this series extends over a three-months period.

Thursday afternoon is known as The Club Women's Half-Hour. These programs, now in their second year, include talks and music. The radio chairman of the Oregon Federation of Women's Clubs develops them jointly with the KOAC director of women's programs. Clubs in various parts of the state use the topic as the theme of a program and tune in for the speaker's discussion as a feature of the meeting. Other clubs appoint "listeners" to make notes from the talks and report them at meetings of the organization.

The afternoon radio club programs are believed to be the most effective type of listening groups developed by KOAC. Topics throughout the five years of their existence have dealt with family life problems, particularly parent-child relation-

ships. The 1935–36 series, extending from October to April, is titled Is Your Child Growing Up and is by a professor of psychology.

The scheme of these radio club broadcasts is this: The guest lecturer prepares a detailed program outline for each meeting, including in it questions for discussion and references on the topic of the day. These are sent to all enrolled groups. Radio clubs meet where there is a radio, sometimes at the home of a member, sometimes at the schoolhouse. Usually they call the meeting for 2:30 p.m., conduct preliminary business as suggested on the outlined program, then promptly at 3:00 o'clock tune in for the broadcast of the day. During the first ten or twelve minutes the guest lecturer answers questions sent in by radio club secretaries, then devotes the remainder of the half-hour to the topic announced for that day. At 3:30 p.m. the radio is turned off, and the study group discusses the lecture and considers the questions noted on the detailed program. Immediately following the meeting the club secretary sends in a report of radio reception, opinion of the broadcast, and any questions that members want answered.

Any group of friends or neighbors, or any organization, may enroll as a radio club by filling in the enrollment blank. Detailed programs, report blanks, and other aids are sent regularly to the group. The peak of enrollment for these radio groups showed 53 clubs enrolling 596. Judging from reports and comments, these radio clubs have proved to be an effective means of guiding the thinking of homemakers on subjects of parent-child relations, of stimulating group discussion on problems of family life, and of promoting the intelligent adoption of recommended practices.

In line with the most progressive movement in the field of adult education by radio, the Tuesday evening lectures on The ABC's of a Homelike Home correlate with a correspondence course of the extension service on house furnishings. In other words, KOAC broadcasts a series of lectures keyed to the topics assigned in the correspondence course. Students enrolled for the work listen in and thereby gain additional insight and inspiration in the course. Listeners, in general, profit by the discussion of subject matter as it affects their homes.

Evidences of interest in all these broadcasts for Oregon women from the state-owned educational station are the communications received by the program director; the number for 1934–35 was 1,665. Bulletins and mimeographed leaflets, totaling 12,861, made available chiefly through the Oregon home economics extension service and the Bureau of Home Economics at Washington, were distributed as a result of these programs.

WRITING FOR LISTENERS

HELEN CROUCH DOUGLASS

For the past nine years the radio service of the United States Department of Agriculture has been putting out a syndicated series of Housekeepers' Chats for broadcasting daily by a local "Aunt Sammy." This service now goes to some two hundred stations in the forty-eight states and Hawaii. The purpose of these talks is to give homemakers useful information on the scientific practice of their job. The problem is to put this information in a form easy for anyone to deliver and interesting enough to hold the attention of the typical housewife who probably will be keeping her eye on the baby and her hand on the broom while her ear is toward the radio. Out of the experience with these particular radio programs come the following ideas about selection of topic and manner of writing home economics radio talks in general.

First, about selecting a topic. In gen-

eral, a good rule seems to be to choose a small, specific subject rather than a broad, general one. The human mind can hold only so many ideas at a time, and its capacity is considerably cut when it is already partly taken up with the baby and the broom. Most effective radio talks are appetizers rather than full meals. They don't satiate the listener with so many nourishing facts that none has flavor; rather, they serve up one zestful bit of information that makes the listener want to taste more. For example, a talk on modern scientific methods of canning is less likely to hold interest than one on the safe canning of the corn ready in the garden. The listener who finds this small definite piece of canning information valuable will want more when her other vegetables are ready to can.

Which brings up another characteristic of a good topic—timeliness. The most vivid talk on canning methods won't interest the housewife as much in February as in July.

Another way of bringing information close to the listener is to tie the subject to such eternal interests as the family pocketbook or the family health. To take the canning talk as an example once more, it will have the most appeal if it is not only timely but shows definitely how canning may save expense or benefit health.

News broadcasts are becoming increasingly popular. So the home economics talk that reports a new discovery or recent event is of special interest. Again, it may be novelty that catches the attention most, something different in the familiar field of homemaking.

As for the writing of the talk, no hard and fast rules exist, except the general rules of all good writing. A clear, pleasant, enthusiastic voice will often make dull script go over fairly well. But anyone who has the job of preparing radio talks for the average voice soon finds little writing tricks that make any talk more effective.

The style that has proved most successful over the air is simple, natural, and conversational, no matter how scientific the subject. That means simple, familiar words with the fewest possible technical terms, and it means short, easy, straightforward sentences.

Just why so many home economics speakers avoid this simple style is a question. Radio managers say that scientists and teachers generally don't make interesting talks if left to their own devices. The scientist in front of the microphone is likely to talk as if he were addressing a learned scientific meeting, and the teacher as if she were in the classroom instructing the ignorant young. In fact, one well-known radio director declared some time ago that it was easier to get a good talk over the air from a cowboy or a backwoodsman than a Ph.D. People without the so-called higher education often are able to express themselves more naturally and colorfully than those of us whose vocabulary has been changed by scientific and educational training. An unschooled person often knows all the tricks of good story telling and also knows how to use words to build a clear picture for his listeners. The village gossip talking over the back fence about the housecleaning demonstration may give her neighbor a better picture of housecleaning methods than the specialist herself could if she had only words to rely on.

So the home economist who sets out to write a radio talk needs to forget the language of the textbook and the scientific manual. She needs to come out of the laboratory and classroom and imagine that she is on her neighbor's porch just talking. She may have news to report, a story to tell, or advice to give. As a radio speaker she is a guest in her listener's home, and she must be a welcome guest if she wants to stay there long enough to finish her conversation. So she takes pains to make her talk interesting, cheerful, sympathetic, and not

too long-winded. She tries to build an easy "you and I" relationship between herself and her listener. Notice how different this is from the impersonal scientific manner, which puts emphasis on facts rather than on the people who discover or use those facts. The scientist religiously avoids using the first and second personal pronouns. He gets around "I" in every possible way. But the story teller naturally uses the first person often. And the advice-giver has to use the second personal pronoun often. Since an effective home economics talk both tells stories and gives advice, the writer will use both "I" and "you" liberally. The writer will also hold to the active voice in her verbs—that is, she will make straightforward rather than backward statements. The scientist or the textbook may say, "The study was made," but the radio writer will say, "I made it" or "We made it," or "She made it."

As for the organization of the speech, the first paragraph will probably be the hardest to write, for this first paragraph must catch the listener's interest and also announce the subject of the talk. The tendency in writing this paragraph is to make a formal introduction with a lot of vague generalizations on all phases of the subject—to beat around the bush instead of plunging in. This kind of a first paragraph is ideal for driving listeners away. A good start may be a bit of lively news or an anecdote or some quip to put the listener in good humor, or simply a statement of what the topic is and perhaps also why it was chosen. The important point is to catch the listener's interest. Then, the succeeding paragraphs develop the topic. Covering a subject in narrative or storytelling style is one good way to hold the interest. Another is to state facts or ideas in such careful sequence that the listener will never lose the thread of thought.

The wind-up of a good talk includes two things—a summary of the main points to clinch them in the listener's mind, and directions as to how she can get more information on the subject. A good talk always leaves the listener with something to do—and a good reason for doing it.

The length of the speech is also important. The present tendency is away from long informative speeches toward the six- or seven-minute chats. Fifteen or twenty minutes of one voice is often too monotonous for the listener. When that much time is allowed for a home economics radio talk it will generally be more effective if given in dialogue or interview form rather than in a straight monologue. The change of voice helps to keep the listener's interest.

A last point. Many people ask about using humor in home economics radio talks. As elsewhere, it is most successful if done well and a dreary failure if the writer is not a natural humorist.

SUGGESTED READINGS

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Includes annotated bibliography of 91 references to books and articles in periodicals.

Educational broadcasting. By MERRILL DENISON. Philco Institute of the Audible Arts, New York City.

How to Talk. By JOHN M. CLAPP and EDWIN A. KANE. New York: The Ronald Press, 1928, 647 pp.

Though containing only a few direct references to radio broadcasting, every chapter of this ably written book gives helpful suggestions, blending as it does precept with example in an exceptionally forceful way.

Listening to farm broadcasts. By W. D. PORTER. University of Wisconsin, Department of Agricultural Journalism Bulletin 5, 1935, 12 pp. [Mimeographed].

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SIGNS OF THE TIMES

THE Y.W.C.A. AND HOUSEHOLD EMPLOYMENT

DOROTHY P. WELLS

Those studying occupational trends tell us that in the near future there will probably be fewer opportunities for women in clerical and industrial fields and an increasing demand for workers in the domestic and personal service occupations. But girls are not going to enter domestic occupations willingly or in any numbers until drastic changes are made. While many workers may receive fair compensation, others are paid miserably low wages; hours of work per day and week are unstandardized and are often cruelly long; time off varies and is uncertain; living conditions for those "living in" are many times quite different from those of their employers. These conditions are largely responsible for the social stigma attached to household employment. The social stigma and the difficulty of securing proficient workers will remain until we revolutionize our thinking and action in regard to working and living conditions. A competent household worker adds much to the smooth running of a home and deserves respect. Her hours must be more nearly comparable to other workers. Workers thus freed from a 68-, 70-, 80-, and even a 90-hour working week will then have leisure to lead their own lives. A shorter working week should also result in greater efficiency on the "job."

The National Board of the Y.W.C.A. and many local Y.W.C.A.'s have been interested in household employment for many years. The Y.W.C.A., having both employers and employees in its membership, has been in a particularly favorable position to tackle the problems in this field, and from the beginning employers and employees have worked together. Impetus was given the movement when, in 1933, codes became effective for other industries. No code could be considered for household employees, largely because there was no organized group of employers or workers to speak for the occupation. At the same time reports from Y.W.C.A. and other employment bureaus and from groups of household employees in Y.W.C.A. industrial clubs indicated appalling conditions. A subcommittee on household employment of the Public Affairs Committee of the National Board was formed. Letters asking local Y.W.C.A.'s to study the problem and to take some action to improve conditions were sent to all Y.W.C.A.'s; and largely as a result of these there are now about fifty-eight groups (about one-half of which are active), some made up of employers, others of employers and employees, all working to improve standards. Some of these committees are no longer Y.W.C.A. groups but have become community councils.

The program of the Y.W.C.A. has been greatly stimulated and helped by the work of the Women's Bureau, the U. S. Office of Education, the National Committee on Household Employment, and other interested groups. During the past year a number of articles on different phases of household employment as well as reports of local projects have appeared in *The Woman's Press*, the official magazine of the National Board of the Y.W.C.A. The National Board and the National Committee on Household Employment, after consultation with employers and employees in

many parts of the country, have drawn up "Proposals for a Voluntary Agreement Between Employer and Employee"[1] covering duties, weekly hours of work, time off daily and weekly, minimum wage, payment of wages, living conditions, etc. They hope that councils, representing forward-looking employers, economists, employment bureau workers, household employees and others interested, will be formed in towns and cities to promote better standards and voluntary agreements based on these proposals.

As a preliminary to this a number of committees have gathered facts about local conditions through questionnaires returned by employees and sometimes by employers. In Hartford, Connecticut, the Y.W.C.A. cooperated in a study with the State Department of Labor, which at the same time was making a study of another city and a town in Connecticut. The result of this survey is shortly to be printed. Facts on local conditions have also been gathered from Y.W.C.A.'s and other non-profit-making employment bureaus. Opinions from employers on what working and living conditions ought to be have been secured through questionnaires. The results of these local studies have often been the starting point for arousing interest in the subject.

The Y.W.C.A. employment bureaus in Honolulu, in Houston and San Antonio, Texas, and in Detroit, Michigan, have drawn up recommended standards and have distributed them to employers asking for workers.

In Chicago, Detroit, and other places panels made up of employers, employees, and representatives from employment bureaus have discussed the present situation in household employment and the ways out. Skits depicting various phases of the problem have been given by both employers and employees before groups of various kinds. In Madison, Wisconsin (which is the only state where household workers are included in the minimum wage law), a local committee discovered that many girls were receiving a wage below the minimum. A local minister used some of its findings in a sermon, after which the newspapers carried on an extensive campaign to "arouse social conscience in regard to injustices being done domestic workers." In an effort to reach the woman who does not belong to clubs, has no church connections, and is sometimes the worst exploiter, carefully phrased letters describing the need for standards, the value of schedules of work which make possible more regular hours and definite time off and attitudes which make for the effective relationships in the home, were written by experienced employers and published in the paper three consecutive Sundays.

Last spring during the national convention of the Young Women's Christian Associations in Philadelphia employers and employees met together to discuss their problems "in sympathy and understanding" on both sides.

Many groups realized that if they are to bring about more generally the conditions found in the better managed homes there is also need for "performance standards." In many places they have experimented with training projects or have cooperated with the schools, F.E.R.A., and other groups. A recent statement[2] from the subcommittee on household employment recommends among other things that any plans for training include:

1. Adequate facilities for placement and follow-up after placement, to check on the skills of the

[1] Copies may be secured from the National Board, Y.W.C.A., 600 Lexington Avenue, New York City, and the National Committee on Household Employment, 525 West 120th Street, New York City.

[2] Copies may be secured from the National Board, Y.W.C.A., 600 Lexington Avenue, New York City.

worker, and the standards maintained by the employer

2. A committee to determine what are fair standards and to promote them not only through the placement bureau but throughout the community by means of talks, discussion groups, newspaper and magazine publicity, etc.

Household employees are working on special projects of their own. In some sections of the country where girls are receiving as little as $3 and $4 a week or less, budgets are being kept. Schedules which make possible a 60-hour week are being discussed. Girls are asking if psychologists cannot meet with them and tell them why some employers "do and say certain things." Others are studying how they can work effectively both by themselves and with employers to improve conditions and what union organization might have to offer. During the past summer many household workers have attended Y.W.C.A. conferences. Conference leaders meeting with these girls have been impressed by their real interest in housework and their great concern for the conditions that generally surround it.

Attempts have been made to include household employees in minimum wage laws and in other protective legislative measures. Although a few groups here and there have been active, so far almost nothing has been accomplished. Is there any reason why household workers should not be included in unemployment insurance, old age pensions, and workmen's compensation?

What is going to happen to household employment within the next decade? Employers, employees, placement workers, those in the field of home economics, and those interested in the leisure time of workers must face the question. The answer will depend largely on what they do. Vision, unselfishness, and a willingness to discard outworn ideas for the sake of a greater good, will be needed to guide those who are to be active in this movement for better relationships between household employers and employees.

A HOMEMAKING COURSE AS TRAINING FOR HOUSEHOLD SERVICE

TREVA E. KAUFFMAN

A homemaking course for training girls for household service is being carried on in New York City which had its beginning in the emergency adult education program organized by the State Education Department. It was developed in cooperation with the Girls Service League of America, which felt that a training course of this kind was needed for the girls with whom it worked and which had facilities for giving the course and for selecting and placing the girls. The State Education Department furnished the teachers, paid them from the state temporary emergency relief funds, planned the course of study, and supervised the teaching.

To assist in developing a functioning program for the work, the League has an advisory committee which convenes several times a year. It is composed of representatives from Teachers College of Columbia University, Pratt Institute, the State Education Department, together with the president and secretary of the League and a member of the placement service, one teacher of the course, the director of the Scientific Housekeeping School, and a homemaker as chairman.

The course was planned in the beginning for six weeks with a six- to seven-hour day for homemaking teaching and was carried on experimentally through the winter and spring. The girls lived at the club of the Service League at East 19th Street, where the equipment is homelike and adequate. Ten to fifteen girls were in training with two teachers during each six-weeks period.

All the girls were selected and later placed by the placement service of the League in cooperation with the teachers of the course. They were at least 16 years of age and were given a physical examination and psychological tests in the beginning. Living and adequate wages were provided.

The following units were developed and taught:

I. Ethics and appreciation of homemaking
II. Care of the house and individual rooms
III. Care and cleaning of household fabrics and personal clothing
IV. Planning, preparing, and serving balanced family meals
V. Table service for family meals and special functions
VI. Health, care, and training of children
VII. Personal hygiene and appearance
VIII. Selection, construction, and repair of personal clothing and household furnishings
IX. Appreciation of an artistic home and construction of artistic furnishings
X. The girl on the job

The units were developed around the girls' personal and home living. Unit I formed a keynote of the whole, but otherwise the units were not necessarily taught in the order mentioned; they were interwoven into the school day and the week, which, of course, was a living period. The meal planning and preparation unit was taught around the three meals a day which the girls ate; the unit on care of the house, around the care of their own rooms and the living room of the club. The teaching within the house was supplemented by good illustrative material and trips to markets, furniture and department stores, museums, art galleries, and private homes.

The course was not planned for training highly specialized maids but for giving the girls an appreciation of homemaking and assistance to the homemaker in general household work. The value of training for homemaking was stressed throughout the training with the girl and was called to the attention of the homemaker.

After experimenting with the course in the city during the winter and spring, a plan was made for setting up a similar course in the country at the Greto Theo House in Roslyn, Long Island, a home given to the League and used as a holiday house. An eight-weeks course was worked out for twenty girls and three homemaking teachers, the girls and teachers living together in the house, along with a recreational teacher who supervised the recreational activities of the girls.

The experiment at this time having developed itself into two parts, a city and a rural one, it was decided at the end of the summer to continue work both in Roslyn and at the city clubhouse. Two teachers with ten to twelve girls continued at the Greto Theo House and twelve to fifteen girls with three teachers at the New York City clubhouse.

The girls from all the courses were readily placed and proved successful in homes. The homes in which they were to be placed were investigated, the homemaker was interviewed, and the training which the girls had received was explained to her. The homemaker was also asked to visit and observe the training given.

The training was followed up by visiting the girl in the home and holding conferences with both the homemaker and the girl. A diploma was issued after the girl had successfully worked in a home for eight weeks. An alumnæ club was also organized for the graduates who returned to the training center for advice and help.

Fifty dollars covers the cost of each girl's training, and this is met by a scholarship fund maintained by the League. This experiment would not have been possible without the help and cooperation of Mrs. Alexander M. Hadden, president, and Miss Stella Minor, secretary of the League. Miss Emma Jensen, the first teacher, gave valuable assistance in developing the working plan.

A DEVICE FOR PREMARITAL COUNSELORS AND TEACHERS OF COURSES ON MARRIAGE

ROBERT G. FOSTER

Premarital counseling includes two distinct types of service to young men and women. The first falls largely under the heading of personal guidance on such matters as education, personal conduct, vocation, religion, etiquette, and sex information. This is, of course, general counseling and not specifically premarital in nature, but very often the premarital interview is closely interwoven with questions of this sort. The second type involves more specific counseling with the engaged couple who are about to be married and want definite service on such matters as the selection of an apartment within their means, how to budget limited income, where to get competent and reliable birth-control information, readings on sex adjustment in marriage, questions of relation to each other's families. On the college level, the questions of women range all the way from those about ways of meeting men and women and working out their own personality difficulties and feeling of insecurity in men-women relationships, to those asked by persons definitely engaged to be married who want more specific advice. Premarital counseling then must deal with all the factors whose bearing upon the life of the young person and his or her fiancé is significant in decisions about the marriage.

Thus premarital counseling is different from marriage counseling, in which it is necessary to deal with difficulties arising out of differences in the aims and ambitions of the husband and wife, money matters, sex adjustments, social life, drinking, child training, education, the wife's working, and pathological problems well known to the experienced counselor. Premarital counseling seeks to point out to the engaged couple their basis for adjustment in these matters. Where attitudes are too widely different and cannot be resolved in the premarital situation a broken engagement may result, which may be far better than going through separation and a possible divorce after marriage when children may be involved. When expertly conducted, the premarital consultation may become a valuable form of "social preventive medicine."

The function of the counselor is not the same as that of the physician, who is called upon to diagnose and give a specific prescription. Certainly he must be able to diagnose as adequately and carefully as possible, but the process and purpose of diagnosis are slightly different. The diagnosis is often the most important part of the treatment, because during the process of trying to bring into bold relief what the situations actually are that are or may become the basis of conflict, confusion, and difficulty, the client gains the insight on the basis of which he must decide his future course of action. Here is a fundamental difference between educational treatment and medical therapy. The counselor does not conceive his function to be that of an authority who tells the client what he ought to do, but rather that of a keen, alert analyst who helps the client to see the possible alternatives so that he can define his problem for himself and make a more intelligent decision than would be possible without such an analysis.

A "premarital contrast blank," the items of which are listed below, has been used to some advantage in the Merrill-Palmer advisory service in helping clients to think more carefully about the factors involved in their particular cases and in showing the counselor points where conflict may be latent.[1] At the top of the blank are noted

[1] Copies of the blank are available at 5 cents each from the Merrill-Palmer School, 71 East Ferry Avenue, Detroit, with a discount of 10 per cent for 10 or more. The suggestions and criticisms of those who use the blank will be welcomed.

the date and the names of the person interviewed and the interviewer. After each item are parallel spaces for data on the young man or woman interviewed, the fiancé, and remarks. The items are as follows:

1. Age
2. Length of engagement
3. Where and how did you meet?
4. Education
5. Major in college
6. College debts
7. Nationality: father, mother
8. Religious views
9. Religion of parents: father, mother
10. Club affiliations: In college, present
11. Physical vigor (if not examined)
12. Eugenic history
13. Mental level (test or scholastic grade average)
14. Emotional stability and mental health (from interview)
15. Occupational history (home and outside)
16. Occupation of parents
17. Family living together
18. Knowledge of family of fiancé
19. Attitude toward fiancé's family
20. Number of brothers and sisters
21. Rank among children
22. Parental attachments
23. Sibling attachments
24. Agreement as to having children
25. Agreement as to number of children
26. Where do parents live?
27. Where will you live after marriage?
28. What is your income?
29. Number of years at work
30. What savings have you?
31. Birth and rearing: city, village, farm
32. Mobility of parental group
33. Money pattern of parents
34. Your plans for money handling
35. Economic responsibility
36. When do you plan to marry?
37. Reasons for date above
38. Personal habits you dislike
39. Do you smoke? Frequency
40. Do you drink? Frequency
41. Personal appearance
42. What recreational interests have you?
43. What are your hobbies?
44. Interest in art, music, drama, etc.
45. Primary interest—people or things
46. Primary interest—country or city
47. Will wife work after marriage?
48. Background of sex attitudes and relations
49. Attitudes and relations with opposite sex during engagement
50. Attitudes and relations with opposite sex after marriage
51. What ultimate aims have you for your married life?
52. What do you like most about your fiancé?
53. What do you like least about your fiancé?
54. Premarital relations
55. What is your greatest ambition in life?
56. What have you read in preparation for marriage?
57. Unusual crises in life to date
58. Type of wedding planned
59. Test and examination reports: (a) physical premarital; (b) Bernreuter Personality; (c) Thurstone Personality; (d) Detroit Advanced Intelligence; (e) Strong's Vocational Interest Blank—men, women; (f) Allport-Vernon Values Test

The blank is not a finished product but is suggestive of a procedure that may be useful to those who deal with the premarital problems of young men and women. Its chief purpose is to raise questions concerning particular points of their philosophy of life and marriage that will benefit the young couple and to bring to their attention some of the personal and social factors related to marriage adjustment on points where their attitudes and interests may be similar or divergent. It will be noted that many of the items in the blank will need to be redefined in the interview. For example, in connection with number 33, "money pattern of the parents," the interviewer will ask, "How did your parents usually handle their financial affairs?" A discussion about how money has been handled in each family may furnish a good background for a discussion of the plan the couple have in mind for their own financial program.

COOKING FOR FUN

MARION F. BRECK

We have heard much about the value of hobbies and use of leisure time. Adult classes have been formed to develop hobbies

through teaching and practice in many activities where the goal was better appreciation of applied art, or literature, or handiwork of many types. Borrowing a suggestion from our neighbors in Maryland, we have included a unit on cooking for fun in the third year home economics course for high schools, and it has become one of the most popular units in the year's work.

Although a unit on cooking for fun would doubtless be both popular and valuable for any group of girls and boys or men and women, it has had a particular appeal for those girls in high school who are not going to college, who will be the first to marry, and who in former years would probably have left school and taken jobs in factories or wherever they could find them. When these girls do leave school they frequently marry soon and start homes in drab, poorly equipped houses or share the home of their parents, in which case the real authority and sense of satisfaction in meeting managerial problems will be met by the older women. In either case the bride will of necessity work on a low budget. Such a girl needs to understand how to get pleasure from little everyday things and to find the joy of achievement in doing well the homely tasks which all too soon become monotonous and unchallenging.

The units on cooking for fun have been given with two purposes in view: first, to establish an interest in cooking as such, which may extend into a hobby which can be carried on in all times and places and whose benefits may be shared with others. The feel of a well-worked clay as it is molded by the fingers into an object expressive of individual creative effort does something to the worker because it satisfies an inner need for self-expression and tangible achievement. In the same way, the molding of smooth, elastic dough into rolls of a delectable perfection may satisfy an inner longing in a way practicable in any home. It is true that the lovely bowl or pitcher of pottery stands as permanent evidence of successful effort, while the better the rolls are, the more quickly they disappear. On the other hand, the rolls will bring immediate appreciation and general acclaim. The art of cooking is a hobby which may be ridden in many directions. Collecting and trying recipes peculiar to other nationalities, modifying and serving dishes dating back to grandmother's day or earlier, finding out about herbs and raising them in "a garden of fragrance" are all by-paths of a hobby for cooking.

The best teachers observe that this unit does something for the girl beyond developing a new and practical interest. An increasing number of the girls who remain in high school are of the type who have never known what it was to be first in school work, but who year after year have brought up the rear. In attaining perfection in preparing some particular dish, such a girl gets a feeling of success which is promptly recognized by classmates and neighbors. In a small rural community she may gain and hold a reputation at church suppers or firemen's carnivals, as well as in her own home. The thoughtful teacher who knows her girls can adapt the unit on cooking for fun to offer a challenge to the brightest girl or afford an opportunity to the slower one. The unit meets the requirement for good content in a home economics course in that it does something to and for the girl herself.

The second purpose is to raise the standards of food through best methods of selection and cooking. Much food is ruined or made less desirable because of poor cooking in our homes today. The unit gives opportunity for pupils to try out different proportions as suggested in various recipes, to make substitutions according to supplies on hand, and to try out new recipes which have been traded with friends or taken from magazines and papers. Class time for more actual experience in preparation

of dishes develops greater skill and raises the standard for the finished product.

Although the purposes have been much the same in various schools, the approach and content have been different. In one school each pupil selected a basic recipe, and after attaining as near perfection with it as was reasonable, she and the others worked out variations which they served with keen interest not only to members of the class but to other friends and members of families. One small group of girls worked at home to make dishes which they had seen illustrated in magazines, striving to make their results as perfect as those pictured. These girls also made a permanent file of recipes which were collected from many sources and included only after having been tested to prove that they were practical and satisfactory. In another school the girls worked with basic recipes but used different brands of ingredients, such as baking powders, shortenings, and flours, or compared results of standard methods of mixing with quicker procedures. Preparation of dishes to give pleasure to older people and invalids was included in the unit in another school, as for special occasions like birthday parties and other family treats, for contributions to covered-dish suppers and other community affairs, and for making children happy at meal time. The fun here was twofold: that of doing the cooking, and that of seeing others enjoy it and receiving their thanks and commendation. In most schools the unit included or led into home entertainment, and the girls served buffet luncheons, teas, snacks for the high school crowd in the evening or for family celebrations, and gained experience in hospitality both at home and at school.

A good cookbook and *The Hows and Whys of Cooking* by Halliday and Noble were the texts used, supplemented by a wealth of bulletins and magazines.

For many young homemakers there is so little of pure fun associated with the routine of their housewifely tasks that anything to relieve the "three-meals-a-day" attitude toward cooking may well find a place in the homemaking course. Teachers have for so long taught the importance of food for health and cooking food for development of flavor, color, and conservation of nutrients that they think of food preparation as a duty only. It seems well to add the thought that food is also selected and prepared for the pleasure it gives and for the fun of demonstrating skill and sharing the results with others. The first approach must certainly not be sacrificed for the second, but both are worthy of a place in the instruction of those who are to make happy homes.

MUNDELEIN COLLEGE EXHIBITS FOR STUDENT CLUBS

VIRGINIA SCHMIDT

The students of Mundelein College, Chicago, selected the education of the consumer as the general theme for their program when they were hostesses to the delegates from the student clubs of the American Home Economics Association during the Chicago meeting in June, 1935. When the delegates arrived from the Palmer House they assembled in the auditorium for an opening session, and after that they were escorted on a tour through the skyscraper college building and entertained at a series of exhibits which had been planned and arranged by students in the department of home economics.

Questions called forth by the program of work of the national association during the past year had been of vital interest to the Mundelein students, who are alert to the fact that a knowledge of money expenditure and value received in return will make for a prosperous and wholesome family life. They had these in mind when preparing their exhibits, in which answers to the

following questions were graphically represented: Which type of orange is the best to buy? Should you read labels before purchasing canned goods? Have you ever noticed that while one empty can may just slip inside another, the difference in weight in the two cans when filled may amount to a quarter of a pound? Is it possible to bring variety and interest into menu planning without a proportionate increase in cost? What facts are really known to the average buyer regarding the nutritive value of foods? What are desirable qualifications for sheets? To what extent is your wool blanket all wool? Do you know your silks? What facts determine the wearing quality and satisfactoriness of hosiery? What are good buying points in toweling?

The exhibit on better buymanship of foods illustrated the economy of relatively large purchases of such materials as flour, sugar, and salad dressing. Colorful charts showed the importance of purchasing foods in season. Costs of various types of baking powder were compared. The best type of orange then available on the Chicago market for juice content was proved to be the 216 Valencia. Estimates were shown to indicate that in several brands of canned cherries the cost per cherry varied from a third of a cent to one cent. Forty different forms of macaroni in one display suggested many possibilities of varying a menu without a proportionate increase in cost. Another exhibit pointed out that, although the prunes of 110–120 size yield three times as much prune meat as the 30–40 size, there are many times when, in serving, the larger prune would give greater satisfaction. Another display dealt with spices, since many who purchase foods can identify only a few of the most common kinds. The array of cardamon, anise seed, marjoram, saffron, thyme, and other spices and condiments challenged many a student to greater uses of these flavors.

When you buy olives do you know just what quality you are getting? Do you recognize a blemished olive? Do you know which kind is most desirable for your need? An exhibit answered. In another was a map showing the coffee-producing countries and along with it miniature bags of unroasted coffee filled with the actual berries as they come from different countries, the whole showing the difference in size, color, commercial importance, and other factors which affect the net yield, satisfaction, and cost of America's favorite beverage.

Another map depicted the world trade routes over which we receive from other countries more than one-half the sugar and a considerable portion of the salt which we consume, as well as our tea, chocolate, and cocoa. A table set with a beautiful linen from Donegal, Haviland china, Bavarian glass, blossoms from our own out-of-doors, salt from Zanzibar, sugar from Cuba, olives from Italy, and figs from Smyrna brought realization that to prepare even a simple meal is to share in world-wide commerce.

Superstitions concerning foods were collected from ancient history to the present and arranged in an interesting exhibit. The six dietary ages of man featured the quintuplets as they left the first dietary age, to be followed by the teen age, the young girl age, the business girl age, the age of counting calories, and finally the adult age. The energy requirement of the football player, the laundress, the college student, the typist, and the idler were compared by a miniature figure of each standing at the top of a column whose height showed the proportionate number of calories required. Another exhibit indicated how far one would have to walk on the level to use up the energy supplied by certain foods; for instance, from a glass of malted milk a ribbon indicated a distance of 8.3 miles; from a piece of apple pie, 4.36 miles; from a doughnut 3.3 miles; and from an apple 1 mile.

The opportunities offered to home economics trained students in the business world of 1935 were indicated by a group of figures in cap and gown leaving a miniature of the skyscraper college and each bearing a banner that showed one of the diverse fields of activity for women.

A HOME ECONOMICS SPEAKERS' BUREAU

LETITIA WALSH

The Wisconsin Home Economics Association is this year offering for the first time the services of a speakers' bureau to women's organizations in the state. The desirability of such a general state plan became apparent when a survey indicated that local teachers were, according to the reports of their school executives, doing rather more with exhibits and printed publicity than with other phases of community organization programs. Evidently local organizations were not sufficiently aware of the possible contributions of home economics, and instructors modestly hesitated to urge their services upon program chairmen. This project of a speakers' bureau was suggested as a part of the work of the committee on publicity, which had heretofore confined its activities to interesting and informing school executives and teachers about home economics.

Speakers for the bureau were secured through the personal solicitation and recommendation of members of the state home economics council. Each council member got in touch with desirable speakers, explaining that no remuneration could be offered but that a club was expected to pay the traveling expenses of its speaker. Over seventy home economists, including both actual homemakers and experienced teachers in colleges and part-time and all-day schools, were sufficiently interested to be willing to offer their time and energy for the purpose. In addition, three men were suggested as being able to contribute outstanding addresses; one professor of chemistry talks on "The Cosmetic Urge," another on "Vitamins and Mineral Elements in a Child's Diet," and a guidance specialist is available for a discussion on "The Home and Mental Health."

In recommending each speaker, the council member filled in a blank on which she indicated the speaker's professional background, present position, subject of speech, dates available in 1935–1936, and the maximum absence possible at any one time. It was found that the subjects suggested could be roughly classified under ten heads: better buying, food preparation and serving, nutrition for health, home furnishing, efficiency in home management, clothing selection, clothing construction, child guidance, understanding girls, and present-day values of home economics. Up to August, better buying was the most popular topic.

The plan was presented to all home economists, public health nurses, and Red Cross nurses through the April number of the Wisconsin Home Economics Association *News Letter*. All were urged to try to advance the cause of homemaking education in Wisconsin by encouraging their local organizations to make frequent use of this service.

The plan of the speakers' bureau was also presented in an open letter to the presidents of women's organizations in Wisconsin. In June the state president of the Wisconsin Congress of Parents and Teachers mailed over five hundred copies to local clubs, with the warmly expressed hope that many would call on the representatives of the bureau for program help sometime during the coming year. The "home" side of the home-and-school partnership is to be stressed in all P.-T.A. programs and cooperation with home economists seems assured. Over a hundred copies of the open letter also went to local presidents of

Catholic women's clubs, and in addition the state president of the Wisconsin Council of Catholic Women personally presented this "constructive plan for homemaking" at the annual state conference in May. Letters were likewise mailed to local presidents of federated women's clubs; and state officers have requested that a standing announcement of the service be carried in *The Wisconsin Clubwoman*, official organ of the Wisconsin Federation of Women's Clubs. Moreover, the state chairman of the department of the American home volunteered to call attention to the bureau in her fall circular letters to districts, and to distribute one hundred copies of detailed descriptions of the plan at her American Home Conference at the state convention in October. At this conference, she hopes to complete plans for establishing some homemaking institutes in the state.

The six members of the committee sponsoring the bureau are located in different sections of the state, and an inquiry concerning a speaker is directed by a club to the one in its district. In response to a request, the committee member will recommend several persons prepared to speak on the subject selected by the club, with a statement of the distance which each would have to travel. The club then makes its choice and completes the negotiations directly with the speaker. In this way, the burden of work is shared by all committee members, and economy in traveling expenses is made possible for the clubs.

EDITORIAL

LIBRARIES AND HOME ECONOMICS

The United States is justly proud of its public libraries; yet the proportion of our population that can enjoy such service is much smaller than many of us realize, and even where it is available many of us do not make as good use of it as we might. More widespread library facilities and more efficient use of the ones there are, would certainly be helpful both in teaching and studying home economics and in making the general public understand the aims and accomplishments of the subject. It was because of this that in 1934 the executive committee of the American Home Economics Association appointed a special committee on home economics in education through libraries with Lula E. Smith of the State University of Iowa as chairman.

In attempting to formulate its work, this committee saw two interrelated problems: to educate home economists to increased appreciation of public libraries as sources of reliable books, periodicals, and other publications on home economics subjects and to keep librarians informed regarding desirable material in our field and ways in which patrons of libraries might make use of them. It quickly realized that the needs of school and adult study groups in home economics and kindred subjects offered one of the strategic approaches to both these goals and that coöperation with librarians was another essential. This year the committee is urging the organization of similar committees in all affiliated home economics associations. A little later it will doubtless have further suggestions to make.

The committee has already established cordial cooperative relations with the American Library Association, which is always ready to give active help in attempts to stimulate the support and use of libraries. The paper on page 553 is a result of this cooperation. It shows how ingenious the friends of libraries have been in making their facilities available in all sorts of places and how desirable it is to have them reach yet more of our people. Before this can happen, the general public must of course come to realize the value and possibility of such service; and since the latter can be of direct aid in home economics programs, home economists will naturally be glad to help in creating the legitimate demand.

The idea of having a special division in some part of the federal government devoted to promoting library service in the same general way that the United States Office of Education promotes educational interests seems an admirable one, and this item in the American Library Association's program will have the hearty support of many other organizations. The present proposal, worked out between the Association and the Commissioner of Education, is to include in the next budget of the Office of Education an appropriation sufficient to cover a division of libraries in that office. This plan is much simpler than the creation of a special independent agency, but even it will have its hurdles to pass, as do most new educational projects. Those who are seriously concerned to see such an aid given to library service must prepare to say their word for the cause. They can get more information about this proposal and library cooperation in general from the American Library Association, 520 North Michigan Avenue, Chicago, Illinois.

THE RED CROSS AND HOME ECONOMICS

With the annual roll call of the American Red Cross coming from November 11 to 28 it seems timely to recall some of the phases of its work that are of special interest to home economists. News notes in the JOURNAL constantly tell of ways in which home economics classes or clubs or individual home economists cooperate with local Red Cross chapters in relief work. Naturally these have to do mainly with projects involving clothing, child care, and especially nutrition. The annual report of the national organization for 1934–35 contains some interesting figures about the last. There we read that 89 chapters were conscious of the nutritional needs in their communities, especially among low-income groups, and that

> Two hundred and seventy home economists assisted chapters in their educational effort to raise the nutrition level of families. With few exceptions these women served on a volunteer basis. One hundred and fifty-five served as instructors of Red Cross Food and Nutrition Courses in fifty-two chapters. Red Cross certificates and cards were issued to 4,573 students who successfully completed the work. Assistance was given in the compiling of food budgets and market lists, in the preparation of nutrition material, in the giving of talks and food demonstrations, as members of nutrition committees, in an advisory capacity and in leading discussions at chapter institutes on integrating nutrition with the Service Programs of Red Cross Chapters.
>
> Three hundred and sixty-seven requests for material on school lunches, food preservation, family food budgets, recipes, menus, etc., were received from executive secretaries, public health nurses, home hygiene instructors, food and nutrition instructors, teachers and chapter officers.

Of course this would hardly have been possible without the consultative service in food and nutrition which is maintained at national headquarters with Melva B. Bakkie as nutrition consultant. This service stands ready to give assistance on "nutrition problems growing out of health and nutrition programs, food and nutrition classes, school lunch projects, and food preservation work," and also sends out an annual questionnaire to enrolled dietitians, by means of which 283 are listed as a reserve for emergency use by the Red Cross, the army, or the navy.

A new project of the American Red Cross in which home economists will be interested is its Farm and Home Accident Prevention program. In a sense this is an outgrowth or by-product of instruction in first aid which the Red Cross has been giving for many years. It was launched on October 1 "to eliminate unnecessary accidents in the farms and homes of the country." The announcement says:

> Every Red Cross chapter will play a part, thus insuring contact with all rural communities. Inspection of individual homes to eliminate accident-causing hazards will be made. School children will be given a list of the most common home hazards, asked to enlist the cooperation of parents or relatives in removing each.
>
> The active cooperation of social, civic, educational and other groups is being secured; many have already pledged their aid. County agents and others will be invited to aid in accident-proofing the farm and work on the farm. . . .
>
> This new Red Cross program is being launched because last year, in the United States alone, 34,500 persons were accidentally killed in the home; 150,000 were permanently crippled; millions were temporarily disabled. More people were killed accidentally in agricultural pursuits than in any other occupation. According to experts, almost all of these accidents could have been prevented.

CONSUMERS' DIVISION, N.R.A.

The summer saw several changes in the organization of consumer interests in the federal administration.

In the N.R.A. the famous Schecter decision of the Supreme Court and the consequent abandonment of the codes naturally brought about a shake-up throughout that organization and others closely associated

with it. Within the N.R.A. proper, consumer interests were then being handled mainly by the Consumers' Advisory Board. Consumers' County Councils and certain other consumer matters were under the Consumers' Division of the National Emergency Council, which was not actually part of the N.R.A. There was also a cabinet committee on price policy dealing with consumer interests in relation to prices. Most of these functions have now been given to a new Consumers' Division set up in the N.R.A.

The director of the Consumers' Division is Walton H. Hamilton, who also occupies two other closely related though separate positions, namely, President's adviser on consumers' problems and chairman of the N.R.A. advisory council. The first gives him direct contact with President Roosevelt when consumer interests require it, and the second places him in a position of influence in the general administration of the N.R.A. He is a lawyer and economist of high standing who has been professor at the University of Chicago, Amherst College, Brookings School, and still teaches at the Yale Law School. His interest in consumer problems was sufficiently well known for him to have been made one of the original members of the Consumers' Advisory Board.

The plans and purposes of the new Consumers' Division were announced early in September in a press release which lists the following proposed activities:

1. Inquiries by economists into prices and price-determining structures of specific industries with a view to suggesting means of eliminating those "trouble spots" in production-distribution systems which keep the product out of the consumers' reach.

2. Education of the public to recognize and encourage wider use of quality standards and grade labeling.

3. Studies of the consumers' cooperative movement both here and abroad with a view to making information on organization and administrative methods and difficulties available to American groups interested in cooperative purchasing.

4. Further organization of consumers' County Councils on a nation-wide basis to gather data and distribute educational information on consumers' problems.

5. The recognition of the interests of the consumer in all matters dealing with production, price, and trade practices.

6. Review of current legislation and public policy from the consumers' viewpoint.

Dr. Hamilton's statement further says of his division:

> The agency . . . is attacking consumer problems under the broad authority of a Presidential order authorizing us "to stimulate interest in the problems of the consumer, to review public policy in so far as it relates to the consumer, and in general to suggest ways and means to promote larger and more economical production of useful goods and facilitate the maintenance and betterment of the American standard of living." . . .
>
> In Washington a research staff is studying the factors which determine the price of milk, dresses, ice, gasoline, paper, automobile tires, automobiles, and a number of products of lesser interest to the general consumer but vital to the industrial order. These inquiries deal with the determination of the present prices and the possibility of wider distribution of goods under the existing industrial agencies, but questions of long-time policy have the stronger emphasis. . . .
>
> Such questions are posed and studied as each industry presents its individual problem. In short, trouble spots and ways around them will be sought. . . .
>
> Closely allied to the work of the research division is the work of studying public policy and its effects from the viewpoint of the consumer. This involves study of most of the legislation before Congress and a great deal of legislation in the states, for it is rarely that a law affects commerce without vitally involving the consumer. Some of the results of such work I shall carry direct to the White House in my capacity as the Executive's Adviser on Consumer Problems.
>
> A public intelligence staff is charged with the duty of making the results of these researches and studies known to consumers through news mediums and through the County Councils.
>
> It is intended further that the interests of the consumer should have full consideration in the councils of industry.
>
> It has been pointed out that although hearings

before Congressional committees, trade practice boards, and similar agencies, have long recognized the right of both labor and capital to a voice, the other party to the action, the consumer of the product, has not always been heard.

In helping the consumer obtain consideration of his problems we emphasize the importance of making the consumer's efforts at bettering his lot cooperative with and supplemental to the efforts of other elements in industrial and merchandising circles striving for greater volume.

Informed direction of effort is all-important. It is foolish to encourage the consumer to waste his energies in haggling with his merchant over the price of an article when the high price is caused by some costly process or procedure along the course of production and distribution. . . .

Publications dealing with all phases on consumer's problems are produced and distributed to County Councils and to a mailing list of several thousand interested citizens. Pamphlets are available on simple consumer's tests of quality, consumers' co-op organization, the progress made and expected in establishment of standards and uniform labeling. A biweekly publication which covers current problems from the consumer's viewpoint goes regularly to County Councils.

CONSUMERS' COUNSEL, A.A.A.

In the A.A.A. as well as the N.R.A. the summer's developments have affected the philosophy and personnel of the section concerned primarily with consumer interests.

Donald Montgomery has succeeded Calvin Hoover in charge of the office of Consumers' Counsel. The present functions and responsibilities of the office were thus described by Chester C. Davis, administrator of the A.A.A.:

As I see it, under the Agricultural Adjustment Administration the office of the Consumers' Counsel has a twofold responsibility.

It has a responsibility to the Administration here in Washington, and it has a responsibility to the general public as consumers of farm products.

Its function, so far as the Agricultural Adjustment Administration is concerned, is to represent the interest of the consumer at every stage in the Administration's activities. When a commodity control program, a marketing agreement, or a licensing agreement is under consideration, it is essential that both producers' and consumers' interests be represented by trained economists, highly skilled in research and in the interpretation of economics. In many cases, there is no conflict of interests: the consumer wants the producer to receive the kind of returns for his produce that will insure the continuance of an adequate food supply, and the farmer wants the consumer to be able to buy an adequate volume of farm products. In some cases, where there is some apparent conflict, on particular points, it is the function of the Consumers' Counsel to represent the consumer and assist in finding the point of maximum justice to both producer and consumer.

Once a program, a marketing agreement, or a license is in effect, it is the function of the Consumers' Counsel to observe its operation, and determine whether or not the results anticipated at the time it was framed are actually being obtained. Should it appear that they are not, the Counsel has a double duty, a duty to urge reconsideration of the program within the A.A.A. to see if the fault needs to be remedied by a change in the provisions of the program, and a duty to give publicity to the facts as they exist.

The giving of publicity is particularly important in the cases where the proper amount of the price paid by the consumer is not being passed on to the farmer, but is being unjustifiably retained as a margin by the middleman. Effective work on making public undue spreads between prices paid by consumers and prices received by farmers has already been done by the Counsel in a number of instances.

The Consumers' Guide, issued by the office of the Counsel and sent free on application, is the vehicle through which pertinent information regarding price movements and living costs is transmitted to individuals and groups concerned with the consumer's interest.

In questions concerning the stimulus or limitation to be given to the production of special commodities, current habits of consumption will necessarily be taken as criteria for consumer interests rather than theoretical optima. The most important products with which the A.A.A. deals are foods, and in the present imperfect state of our knowledge of the nutritive requirements of the individual, let alone the population

as a whole, it is obviously impossible to set up desirable, equitable figures for this, that, and the other product. If we waited until a standard could be agreed upon by the nutritionists, not to mention the farmers, manufacturers, and distributors, it would be years before a single policy could go into effect. Imperfect as is the adjustment between present production and optimum national nutrition, it is obvious that the only practicable gauge for an emergency organization like the A.A.A. is ordinary habits. Fortunately, the Administration seems to realize the difficulty of determining even this and to be inclined to use every feasible means to secure reliable data. It is quite conceivable that these may yield information of use far beyond the immediate purpose. We may get a similar by-product of lasting value from the phase of the work which deals with the problem of utilizing surplus commodities—work which Congress has authorized not only in connection with domestic production and use but in relation to questions of tariffs and international trade. It does not take much imagination to see that such questions cut straight into those of standards of living and that information long desired by home economists may come to light in the process.

SUSANNAH USHER

Her many friends in the home economics world will be saddened though probably not surprised by the news of the death of Susannah Usher in Rockport, Massachusetts, on August 2, 1935. Angina pectoris had for several years forced her to a very quiet life, which she spent partly in Boston and partly at the home which she and her sister owned together at Rockport.

Her going removes another of the group whom we think of as the pioneers in home economics. One of the first women graduates of Massachusetts Institute of Technology, she became interested in the possibilities of the new subject through Mrs. Richards. From the second year of the Lake Placid Conference on, she was one of its faithful and active members. She quite naturally became a charter member of the American Home Economics Association and kept up the connection long after she had ceased active professional work.

Home economists of the second generation remember her as a member of the home economics staff first at Simmons and then for seven years at the University of Illinois, and as special lecturer at the University of Chicago, Cornell, and Teachers College, Columbia University. She also wrote bulletins, textbooks, and articles on foods, bringing to this work the same scholarly thoroughness that was notable in her teaching.

As with so many of the Lake Placid group, it was not merely what she did professionally but also what she was personally that left a lasting impression on those who knew her. In her, fine intellectual attainments went hand in hand with good practical judgment, keen insight, breadth of interests, warmth of heart, sparkling humor, and unfailing charm of manner. Her small, dainty person, always exquisitely yet sensibly dressed, immediately suggested the combination of alertness and conservatism, fastidious taste and cordial friendliness that gave a piquancy to her society. To all who knew her, her going must bring not only a sense of loss to themselves but regret that the generation of home economists now coming to the fore will not have the delightful privilege of recognizing in her the qualities that started their profession on its high course.

It is good to know that only a day or two before Miss Usher's death her old friend Miss Bevier stopped off in Rockport for a day's visit, which gave pleasure and satisfaction to them both.

RESEARCH

PHYSICAL AND CHEMICAL PROPERTIES OF SOME TURKISH TOWELS

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THIS study from the United States Bureau of Home Economics reports the various physical and chemical characteristics of 37 pairs of cotton turkish towels purchased on the Washington retail market during the spring and summer of 1934 and representative of the choice then available. The analyses were made because of the present widespread interest in the establishment of buying guides for the use of consumers and the dearth of published information which can be used as a basis for such guides. The only data of this kind found in the literature to date are those of Johnson (1) who examined 14 competitive towels for thread count, breaking strength, and shrinkage and evaluated their "money's worth" by dividing price by breaking strength.

The towels whose analysis is here first reported[1] ranged in regular retail price from $0.14 to $1.50 each and represented the products of nine different mills. To eliminate the purely style items, only towels all white or towels white except for the borders were chosen. Towels 22 x 44 inches in size were purchased whenever available; this is one of the most common of the six standard sizes allowed in the Simplified Practice Recommendation of the National Bureau of Standards. In other cases the size nearest to it was chosen. The results reported are averages of analyses made on two towels of each kind.

Construction. Weave diagrams for both fabric and selvage were made, and the weaves were designated according to the system reported by Pennington (2). The ply of the yarn, number of twists per inch, and the direction of twist, indicated as S or Z (3), were determined for the ground warp, pile warp, and filling yarns. To determine the thread count, warp- and filling-wise, a distance of 1 inch was marked on the fabric and the number of yarns in that inch counted. The number of ground and pile warps was determined in the same marked place. To compare the length of the loop for the various towels, pile yarns measuring exactly 2 inches in the fabric were removed and the length measured.

Physical analysis. Each towel was measured in two places for length and in two for width to the nearest 1/16 inch. The width of border was also measured and the usable drying area or area of terry fabric calculated.

For the physical determinations the samples were conditioned at least 4 hours and tested in a laboratory maintained at 70°F. and 65 per cent R. H. Thickness, weight per square yard, breaking strength (strip method), and bursting strength were determined by methods used in this laboratory (4, page 28). To measure the rate of water absorption, desized warp strips each 16 inches long and 1 inch wide were laid on an illuminated glass box with one

[1] Jeanne D. Guerin and Helen G. Wheeler of the Bureau staff kindly assisted with the laboratory determinations.

end dipping in distilled water (5). The distance that the water was absorbed was noted at intervals of 30 seconds for 12 minutes. The average distance for each towel was plotted against time, and the number of inches for the first and second 5-minute periods was read from this curve.

Chemical analysis. To obtain a measure of the pH of these towels, a solution was prepared by boiling a 2-gm. sample from each for 10 minutes with 75 cc. of CO_2 free, distilled water under an air condenser (6). The pH of this solution was measured[2] with a glass electrode of the bulb type according to the method of Burton, Matheson, and Acree (7) for very dilute buffers. The materials for the remaining chemical tests and for the water absorption measurements were desized by soaking and rinsing in warm distilled water and then treating in a solution of a starch hydrolyzing enzyme at 50°C. in accordance with the procedure for desizing suggested by the American Society for Testing Materials (8). Fluidity measurements were made on 0.5 per cent solutions of dry cotton in cuprammonium hydroxide at 25°C. with capillary-tube viscometers. The modified procedure developed at the Bureau of Home Economics (4, page 53) was followed. For copper numbers, 1.5 gm. samples of toweling were treated with Braidy solution (4, page 56). Methylene blue absorption measurements were determined on 0.3 gm. samples of toweling with a buffered methylene blue solution of pH 7 (4, page 29).

Results. All the towels analyzed were found to be 3-pick terry weave; that is, three filling threads form one horizontal row of loops. They were all plain terry except D 2, which was a rib, and H 5, a novelty pattern.

[2] Appreciation is expressed to the Section for Industrial Utilization of Farm Wastes, Division of Organic and Fibrous Materials, National Bureau of Standards, for determining the pH of these solutions.

In table 1 the towels have been divided into four groups or types according to the ply of the ground warp and the ratio of the number of ground to pile yarns. Type 1 has a single-ply ground warp with half as many ground as pile ends. Type 2 also has a single-ply ground but has an equal number of ground and pile yarns. Type 3 has two-ply ground warps with half as many ground as pile ends. In this type, as well as in type 1, two pile yarns weave as one. In type 4 the ground warps are two-ply and equal to the pile yarns in number.

The majority of all the towels tested were either types 1 or 4, with all the low-priced towels falling under type 1 and all the high-priced ones under type 4. The medium-priced group included towels of all four types. The rib towel, D 2, had a two-ply pile, but all the other pile warps were single.

As it was impossible to purchase the same size in every quality and as there was a wide difference in the amount of plain woven fabric forming the border, the area of terry was calculated as a measure of the usable drying area. A 11, I 1, and H 5 are the same size, yet their drying areas are 899, 1,014, and 1,172 square inches, respectively.

Table 1 shows there is a trend toward longer loops with increasing price. The values for thickness and weight per square yard, which are given in table 2, are in general higher for the higher-priced towels. When the towels are grouped by types the average values of thickness, as well as weight, are higher for types 3 or 4 than for 1 or 2.

The range in filling breaking strength reported in table 2 is smaller than that for the warp. The pile warps do not contribute to the strength of the fabric, so the warp strength is dependent only on the number of ground warps. The ratio of ground to pile warp has slightly more influ-

TABLE 1

Price, size, and construction of 37 pairs of cotton turkish towels purchased on the retail market during 1934

TOWEL*	PRICE	SIZE		AREA OF TERRY	TYPE OF YARN†			TWIST PER INCH			THREAD COUNT			TYPE OF TOWEL	YARN PER LOOP
		Width	Length		Ground	Pile	Filling	Ground	Pile	Filling	Ground	Pile	Filling		
		inches	*inches*	*sq. inches*											*inches*
A1	$0.14	17.9	35.4	544	S	S	S	14Z	17Z	9Z	23	45	26	1	0.34
B1	0.18	19.2	39.1	635	S	S	S	14Z	14Z	10Z	23	45	25	1	.36
C1	0.22	19.3	37.9	635	S	S	S	14Z	14Z	8Z	20	41	26	1	.36
A2	0.23	21.4	44.3	838	S	S	S	11Z	11Z	8Z	23	46	26	1	.37
D1	0.25	21.8	43.8	817	S	S	S	11Z	14Z	13Z	24	47	32	1	.36
A3	0.25	23.4	44.9	946	S	S	S	15Z	14Z	10Z	22	42	25	1	.35
A4	0.25	22.9	44.8	877	S	S	S	14Z	14Z	9Z	22	44	25	1	.36
E1	0.29	23.2	45.3	986	S	S	S	15Z	17Z	13Z	24	46	30	1	.37
B2	0.29	23.7	47.5	1021	S	S	S	15Z	15Z	8Z	21	41	26	1	.35
A5	0.29	22.1	43.1	881	S	S	S	14Z	15Z	13Z	42	41	33	2	.33
D2	0.29	23.3	47.3	1020	D	D	S	12S of 15Z‡	13S of 14Z	13Z	27	26	48	4	.30
A6	0.38	22.6	43.8	832	S	S	S	13Z	13Z	8Z	25	51	32	1	.36
F1	0.38	22.3	46.1	945	D	S	S	17S of 15Z‡	17Z	13Z	43	43	33	4	.35
A7§	0.39	21.6	43.8	881	S	S	S	16Z	14Z	10Z	23	45	26	1	.39
A8	0.39	21.6	43.3	879	S	S	S	12Z	15Z	15Z	42	42	36	2	.31
A9	0.39	21.8	43.6	785	S	S	S	14Z	16Z	15Z	42	42	36	2	.34
E2	0.39	23.8	48.0	974	S	S	S	17Z	14Z	13Z	28	54	32	1	.35
G1	0.39	21.6	40.4	855	D	S	S	15S of 15Z‡	17Z	10Z	25	48	36	3	.30
D3	0.39	24.0	45.7	920	S	S	S	13Z	18Z	10Z	27	83	33	1a‖	.39
D4	0.50	23.7	46.1	937	S	S	S	17Z	17Z	9Z	42	42	36	2	.39
F2	0.50	22.3	43.3	899	D	S	S	21S of 14Z‡	13Z	13Z	37	37	38	4	.34
H1	0.50	21.8	45.1	904	D	S	S	20S of 18Z‡	14Z	12Z	37	37	40	4	.35
A10	0.50	21.8	44.4	905	S	S	S	12Z	13Z	11Z	41	41	37	2	.31
A11	0.55	23.7	45.9	899	S	S	S	15Z	12Z	14Z	38	37	39	2	.33
A12	0.59	25.1	45.3	965	D	S	S	9S of 16Z‡	15Z	13Z	40	39	42	4	.35
H2	0.59	22.0	41.4	803	D	S	S	19S of 10Z‡	15Z	13Z	38	38	35	4	.37
F3	0.62§	24.4	44.3	1004	D	S	S	19S of 15Z‡	14Z	13Z	40	39	38	4	.44
H3	0.75	24.2	47.6	1018	D	S	S	19S of 12Z‡	17Z	11Z	28	55	37	3	.38
G2	0.75	24.4	49.2	1050	D	S	S	13S of 12Z‡	13Z	12Z	40	40	37	4	.36
F4	0.75	25.6	51.9	1208	D	S	S	17S of 14Z‡	12Z	11Z	37	37	40	4	.38
A13	0.79	23.8	44.6	1047	D	S	S	9S of 12Z‡	14Z	14Z	38	38	40	4	.32
A14	1.00	24.7	47.5	962	D	S	S	9S of 13Z‡	14Z	17Z	41	41	45	4	.40
H4	1.00	21.9	43.8	893	D	S	S	18S of 16Z‡	16Z	17Z	31	31	43	4	.46
H5	1.25	23.4	46.3	1172	D	S	S	19S of 11Z‡	17Z	16Z	32	31	42	4	.50
I1	1.50	23.6	46.0	1014	D	S	S	13S of 13Z‡	18Z	15Z	40	39	55	4	.44
Unbleached	0.15¶	19.4	36.0	698	S	S	S	15Z	17Z	8Z	20	40	29	1	.38
Bleached	0.16¶	18.0	36.0	650	S	S	S	15Z	18Z	9Z	22	44	29	1	.38

* All varieties of towels from the same manufacturer are designated by the same letter, while the number following the letter refers to one quality of that product.
† S = single ply; D = 2-ply.
‡ Ply.
§ Run of mill.
‖ Three instead of 2 pile yarns weave as one.
¶ Per yard.

ence on the warp breaking strength than does the ply of the ground warp, as is indicated by the fact that types 2 and 4 are higher than 3 when the values are averaged by types. Type 1 is considerably weaker than any of the others, for bursting as well as breaking strength.

The rate of water absorption showed a

TABLE 2

Thickness, weight, breaking strength, bursting strength, water absorption, pH, fluidity, copper number, and methylene blue absorption for 37 pairs of cotton turkish towels purchased on the retail market during 1934

TOWEL*	THICKNESS	WEIGHT PER SQ. YD.	BREAKING STRENGTH		BURSTING STRENGTH	WATER ABSORPTION		pH	FLUIDITY	COPPER NUMBER	METHYLENE BLUE ABSORPTION
			Warp	Filling		1st period	2nd period				
	inches	*ounces*	*pounds*	*pounds*	*pounds*	*inches*	*inches*		*reciprocal poise*		
A1	0.031	7.5	19.0	35.4	37	6.1	2.2	6.69	6.58	0.24	2.28
B1	0.032	8.1	18.7	38.8	34	4.2	2.8	6.84	4.56	0.14	2.83
C1	0.041	8.8	18.8	53.3	55	5.3	2.8		4.27	0.20	1.87
A2	0.036	9.2	18.4	39.3	36	6.4	1.9	6.84	4.30	0.22	4.24
D1	0.040	8.7	28.8	30.9	41	6.0	2.2	7.04	3.39	0.11	2.25
A3	0.038	8.6	18.3	40.8	28	5.8	2.5	6.57	4.49	0.31	4.17
A4	0.042	8.9	17.8	37.0	34	6.5	2.5	6.77	4.51	0.22	3.82
E1	0.048	9.7	20.5	33.7	38	8.2	3.0	7.74	5.11	0.24	1.53
B2	0.033	8.4	17.3	48.7	38	5.2	1.8	6.99	4.57	0.17	2.63
A5	0.038	10.2	47.4	32.3	67	6.0	1.8	6.53	4.06	0.24	3.53
D2	0.048	12.3	41.4	42.6	55	6.9	2.4		4.58	0.15	2.32
A6	0.044	13.3	21.6	36.2	38	6.3	2.2	7.17	7.63	0.24	2.84
F1	0.044	11.7	69.9	42.1	79	6.3	2.2		5.82	0.22	1.68
A7	0.055	12.4	19.5	37.2	36	5.6	1.9	6.51	4.98	0.27	3.07
A8	0.040	11.0	64.3	33.9	99	4.9	1.6	6.48	4.42	0.26	3.81
A9	0.049	11.2	70.0	33.6	87	6.8	2.4	6.57	5.50	0.30	2.88
E2	0.056	11.3	25.6	35.6	40	6.8	2.5	7.46	5.10	0.20	1.60
G1	0.047	10.7	40.6	37.3	63	6.8	2.0	6.35	7.87	0.27	1.98
D3	0.051	13.2	35.5	35.0	59	4.0	1.4		4.90	0.17	1.88
D4	0.041	11.3	32.6	64.0	59	4.8	1.4	6.65	5.03	0.13	2.14
F2	0.045	12.3	62.7	34.1	96	3.5	1.2	6.94	6.10	0.20	1.90
H1	0.044	12.5	55.5	35.4	83	2.9	1.0	7.32	4.92	0.16	2.89
A10	0.041	10.4	60.9	30.9	83	6.1	2.1	6.37	5.20	0.21	3.47
A11	0.041	13.4	56.1	39.8	56	6.5	2.1	6.86	6.84	0.31	3.10
A12	0.049	13.6	62.8	39.0	79	4.3	1.1	7.07	5.63	0.27	3.48
H2	0.050	11.4	56.5	32.6	62	5.6	1.8	6.41	4.34	0.18	2.56
F3	0.052	14.3	50.0	33.4	75	4.1	1.2	7.95	9.49	0.29	1.94
H3	0.065	15.4	43.3	41.9	84	5.2	1.6	6.59	4.48	0.27	1.90
G2	0.057	12.8	59.8	36.1	84	5.4	1.8	6.17	16.70	0.26	1.88
F4	0.051	12.8	60.2	39.9	86	6.0	2.3		6.62	0.22	1.90
A13	0.047	11.1	55.9	37.6	54	5.7	1.9	6.90	5.57	0.29	3.10
A14	0.061	14.5	58.2	36.0	64	5.8	1.9	7.10	7.89	0.24	2.84
H4	0.055	13.5	45.1	43.2	77	5.4	1.7	7.06	4.82	0.16	2.12
H5	0.064	14.6	41.6	37.4	71	4.2	1.2	6.90	4.68	0.22	2.15
I1	0.057	15.8	63.6	51.3	81	4.1	1.6	6.66	7.91	0.39	1.80
Unbleached	0.030	8.3	23.6	35.0	34	0		6.53	4.93	0.20	4.49
Bleached	0.033	8.1	20.9	43.2	46	5.9	2.3	5.63	6.04	0.25	1.84

* All varieties of towels from the same manufacturer are designated by the same letter, while the number following the letter refers to one quality of that product.

variation of 2.9 to 8.2 inches in the first 5 minutes and 1.0 to 3.0 inches in the second interval. When the values are averaged for the four types of construction the water absorption of type 4 is lower than that of the other three. In this connection it should be noted that rate of absorption as measured by this method does not take into account the total water held. Type 4 should be high in total water absorption. D 3, a variation of type 1, sold as "triple thread" with superior absorbing power, actually was lower than the average values for that type. Using ply ground warps and more threads per inch to increase the strength of the fabric reduced the water absorption as shown in table 2. In general, as the twist per inch increased the rate of water absorption decreased.

Chemical methods are more sensitive for detecting damage than are breaking or bursting strengths. The results obtained for them depend upon the quality of the cotton in the towels. In considering the results of the chemical tests reported in table 2 it should be noted that the higher the values, the greater is the deterioration.

No relationship is evident between the type of the construction and the chemical values when the towels are grouped into the four construction types. The chemical characteristics apparently depend upon the method of finishing at the various plants, nor do they bear any definite relationship to the retail price. Towels from the same mill gave approximately the same chemical values, while those from different mills but of the same price gave widely varying results. For example, the fluidity values of the five pairs of towels from mill H which are all differently priced varied only from 4.34 to 4.92, while the values of the three pairs that cost $0.75 but that are from different mills ranged from 4.48 to 16.70. Such results are to be expected since the different reagents which might be used at the various mills or even the same reagents under different conditions will produce modified celluloses of different properties. The average values for the chemical properties of the towels from mills F and H, which are owned by the same company, vary considerably.

When the towels are grouped according to mill and the average chemical values are then arranged according to increasing fluidity, an increase in copper numbers is also apparent. The makes that are characterized by low fluidities and low copper numbers give nearly neutral pH results, while those that are more acid or alkaline are characterized by higher values, that is, are more deteriorated. The ones that show a decided acid reaction tend to give higher figures for these tests than do those with alkaline reaction. There is no correlation between the fluidity and methylene blue results for the various mills. The methylene blue absorptions are lowest for the makes which exhibit the most alkaline reaction.

Although there is no definite relationship between the chemical characteristics of the various towels and their price, the average value for the pH of all towels that cost less than $0.50 is 6.75, while that of those which cost more is 6.86. Since the higher-priced towels tend to give a more nearly neutral reaction, it might be assumed that they have been finished more carefully.

The pH values of the towels may be correlated with their copper number and methylene blue absorptions. The towels that reacted alkaline gave a low average value for both of these measurements, while those that reacted acid gave considerably higher results. The average fluidity values are approximately the same for both groups. Towels left in an acid condition might be expected to show even greater chemical deterioration after an interval of service.

The towels with a low copper number

tended to have a low fluidity, a low methylene blue absorption, and a neutral pH. For example, the 13 varieties with copper numbers of 0.20 or below had an average fluidity value of 4.73, absorption of 2.42, and, in general, pH values near 7. On the other hand, the 13 varieties with copper numbers of 0.25 or above had an average value for fluidity of 6.92, and absorption of 2.69, and in all but two cases were left in an acid condition.

Conclusions. The physical properties of these towels tend toward higher values as the purchase price increases. Construction type 1, with the lowest average price, is also lowest in all properties except water absorption. Type 2, the next in price, is of medium weight and high in strength as well as absorption. Type 3 is high in thickness, weight, and absorption, but of medium strength, while type 4, which is low in water absorption, is high in all other properties. The chemical properties of the towels depend upon mill finishing practice rather than upon price. In general, towels that give an alkaline pH contain less oxidized cellulose than those that react acid. Towels characterized by low copper numbers usually have a pH near 7, a low fluidity, and a low methylene blue absorption. The wide ranges found for the physical and chemical properties indicate that towels might be graded in some way similar to that used now by one large retail store in grading blankets for warmth and durability.

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PRACTICAL SIGNIFICANCE OF RESULTS

This study shows the great range in the properties of cotton turkish towels and indicates a practical method of classifying them which could be used as a basis of a quality-grading system.

A STUDY OF POPULAR-PRICED WHITE BROADCLOTH SHIRTS[1]

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WHITE broadcloth shirts for men are used extensively, and for many it is claimed that they are made of pre-shrunk fabrics. As a part of a general study of distribution of consumer goods undertaken by the University of Minnesota through the financial support of the Rockefeller Foundation, eleven such garments were purchased in duplicate at retail from different types of stores in Minneapolis and St. Paul in the spring of 1933 and were studied to determine their measurements as compared with suggested standards, the character of fabric and type of construction employed, and the effect of laundering—items which concern the consumer buyer.

Nine of the shirts sold at about $1.50, and two at about $2 each. Three of the eleven were nationally advertised brands. All were made of mercerized white broadcloth in the same general style with attached soft collar, barrel cuff, and a box plait finishing the center front opening. All were purchased as size 15. In all cases the length of sleeve was stated on the collarband. The marked lengths of sleeves were: Nos. 2 and 11, 33 inches; Nos. 1, 3, 4, 9, and 10, 34 inches; Nos. 5, 6, 7, and 8, 35 inches.

Cost, type of store at which purchased, and claims as to shrinkage are shown in the next column.

Purchasing Data Concerning Shirts Studied

Laboratory No. of shirt	Price	Type of store	Claims regarding shrinkage
1	$1.44	Department, mail order	Pre-shrunk
2	1.49	Department, national chain	Pre-shrunk
3	1.55	Department, chain, local buying	Pre-shrunk
4	1.55	Department, locally owned	Pre-shrunk
5	1.55	Haberdashery, chain	Pre-shrunk
6	1.65	Department, locally owned	Pre-shrunk
7	1.65	Haberdashery, locally owned	Pre-shrunk
8	1.65	Haberdashery, manufacturers chain	Pre-shrunk
9	1.65	Haberdashery, locally owned	Sanforized
10	1.95	Department, locally owned	Sanforized
11	1.99	Department, chain, local buying	

The suggested standards used for comparison in considering the results of this study were the "Recommended Commercial Standard for Men's Shirts" (1) as published by the U. S. Department of Commerce and a list given by Simon (2) of certain features required in a so-called "perfect" shirt to sell at about $1.35. The former proposes the following standard minimum measurements for size 15: (1) stamped collarband size, 15 inches; (2) chest, total circumference, 46 inches; (3) front, length of, 33 inches (4) back, length of, 33 inches; (5) armholes, length around curve, 20½ inches; (6) sleeve width around at middle of sleeve, 16½ inches. The characteristics suggested by Simon are: (1) lustrous, high-count broadcloth, 100 per cent pre-shrunk; (2) tensile strength, 75 pounds in the warp, 30 pounds in the filling; (3) zero shrinkage in the neckband; (4) not more than ¼ inch shrinkage in sleeve length; (5) approximately 24 stitches per inch in sewing; (6) deep armhole; (7) 7 ocean-pearl buttons stitched four ways.

Measurements. Each shirt was carefully

[1] Paper No. 1336, Journal Series, Minnesota Agricultural Experiment Station.

measured to the nearest $\frac{1}{8}$ inch with a steel tape, the fabric being flat on a table without stretching, according to the methods described in "Recommended Commercial Standard for Men's Shirts" (1), and the results are given in table 1.

Differences between measurements on one pair of shirts (No. 9) of the $1.50 group and on the two pairs (Nos. 10 and 11) of the $2 group were not greater than $\frac{1}{8}$ inch for any one measurement, indicating marked uniformity in two shirts chosen at random for any one of these three brands. Maximum differences between two shirts of a given pair were: $\frac{1}{8}$ inch in length of collarband; $\frac{1}{2}$ inch in length of front and back

TABLE 1

Measurements of shirts before laundering

LABORATORY NO.	COLLAR BAND	CHEST	FRONT	BACK	ARMHOLE	SLEEVE	
						Width	Length
	inches	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*
1	15⅜	45*	34	33½	21½	16*	32⅛*
1a	15⅜	44⅝*	33⅝	33⅞	21⅜	16⅛*	32⅞*
2	15⅜	46	33½	33½	20⅝	16*	33¼
2a	15½	46⅜	33⅝	33⅝	21	16⅜*	33¼
3	15⅜	45⅝*	32⅝*	33⅜	21⅜	17	34⅛
3a	15⅜	45⅞*	32⅞*	33⅞	21⅞	16⅝	35
4	15⅜	45⅝*	32⅛*	32⅛*	22	16½	34⅛
4a	15⅝	45⅛*	32⅜*	32⅜*	22	16⅝	34
5	15⅜	46½	34	34	21⅛	15⅝*	35⅛
5a	15⅜	46⅜	33⅜	33⅜	21⅛	16*	35⅞
6	15⅜	45½*	33⅜	33⅜	20⅜*	15½*	35⅞
6a	15⅜	46	33⅛	33⅛	20⅜*	16*	35⅞
7	15⅜	46⅛	33⅛	33⅛	22	16⅜*	35⅜
7a	15⅜	46⅛	33⅛	33⅛	21½	16⅜*	35
8	15⅜	46	33⅞	33⅞	21⅜	17	36⅛
8a	15⅜	46⅛	33⅞	33⅞	21⅜	17⅜	36
9	15½	45⅛*	32½*	33⅜	20⅞	16½	34⅞
9a	15⅝	45⅜*	32⅜*	33⅛	21	16½	34⅞
10	15⅜	45⅞*	32⅞*	32⅞*	21⅜	17	34⅛
10a	15⅜	46	33	33	21½	16⅞	34⅜
11	15½	44⅞*	33⅛	34	20⅞	16⅞	33⅛
11a	15½	45*	33⅜	33⅞	20⅝	16⅜*	33⅛

* Measurement less than minimum in Recommended Commercial Standard or than stated length of sleeve.

and in length and width of sleeve; $\frac{3}{4}$ inch in circumference of chest; and $\frac{1}{2}$ inch in size of armhole.

Only three shirts measured up to the proposed standard at every point. Among the $1.50 shirts total chest circumference and width of sleeve were the two measurements which most commonly failed to meet the standard, 5 out of 9 being short. All of the shirts studied exceeded the marked collarband size, varying in length from $15\frac{3}{8}$ to $15\frac{5}{8}$ inches.

exceeded the stated size, as did also both of the $2 shirts. In this connection it should, of course, be borne in mind that shrinkage in the length of collarband may be influenced not only by the finishing of the broadcloth but also by the interlining and possibly by the stitching. With one exception in each price group, all the laundered shirts fell below the standard for chest circumference and length of front and back, while many fell below for sleeve width. The length of sleeve after laundering was as

TABLE 2

Measurements of shirts after 25 washings

LABORATORY NO.	COLLAR BAND	CHEST	FRONT	BACK	ARMHOLE	SLEEVE	
						Width	Length
	inches	*inches*	*inches*	*inches*	*inches*	*inches*	*inches*
1a	$14\frac{3}{8}$*	44*	32*	32*	$21\frac{1}{8}$	16*	32*
2a	15	$44\frac{1}{4}$*	$32\frac{6}{8}$*	$32\frac{6}{8}$*	$20\frac{1}{4}$	16*	$32\frac{3}{4}$*
3a	15	45*	32*	32*	$21\frac{1}{8}$	$16\frac{1}{8}$	$34\frac{1}{8}$
4a	$14\frac{6}{8}$*	45*	$31\frac{1}{4}$*	$31\frac{1}{4}$*	$21\frac{3}{8}$	$16\frac{1}{4}$	33*
5a	$15\frac{1}{8}$	$45\frac{1}{4}$*	32*	32*	$20\frac{3}{8}$*	$15\frac{3}{4}$*	$35\frac{1}{8}$
6a	$15\frac{1}{8}$	45*	$32\frac{1}{8}$*	$32\frac{1}{4}$*	$20\frac{3}{8}$*	16*	$35\frac{3}{8}$
7a	15	45*	32*	32*	21	$16\frac{3}{8}$*	34*
8a	$14\frac{6}{8}$*	45*	$32\frac{1}{8}$*	$32\frac{1}{2}$*	21	$16\frac{1}{4}$	$34\frac{1}{8}$*
9a	$15\frac{3}{8}$	$45\frac{1}{8}$*	$32\frac{1}{4}$*	33	$20\frac{6}{8}$	$16\frac{1}{4}$	$34\frac{6}{8}$
10a	$15\frac{1}{8}$	$45\frac{6}{8}$*	$32\frac{6}{8}$*	$32\frac{6}{8}$*	$21\frac{3}{8}$	$16\frac{3}{8}$	$34\frac{3}{8}$
11a	$15\frac{1}{8}$	$44\frac{1}{4}$*	$33\frac{1}{8}$	$32\frac{1}{8}$*	$20\frac{1}{4}$	$16\frac{3}{8}$	$32\frac{6}{8}$*

* Less than minimum in Recommended Commercial Standard or stated length of sleeve.

Shrinkage. One shirt of each pair was measured after being washed 3 times and then ironed at a steam laundry, and again after a total of 25 washings and 2 ironings. Although ironing may distort the fabric somewhat, it is in that state that shirts are worn and differences in size observed in everyday use. Measurements of collarband, front and back lengths, and sleeve lengths were taken parallel with the warp of the fabric; chest circumference and sleeve width parallel with the filling.

As is shown in table 2, after 25 washings three of the $1.50 shirts measured less than 15 inches at the collarband, while three still

great as that stated on the garment in the case of only four from the $1.50 group and one of the $2 shirts. Also, the sleeves of two of the $1.50 shirts were 1 inch shorter, and those of one were 2 inches shorter than the stated length.

Differences between measurements before and after laundering are expressed as percentage of shrinkage in table 3. It will be seen that the percentage of shrinkage after 25 washings of front, back, and sleeve length was similar in shirts Nos. 2, 6, and 7. Otherwise no evidence of consistent behavior when comparing warp shrinkage or filling shrinkage is to be found in these

data. Three $1.50 shirts and one of the $2 group may be said to have reached approximately maximum shrinkage after 3 washings, further decreases in size after 25 washings not exceeding about 0.75 per cent. Considerable shrinkage continued after the third washing in shirts Nos. 5 and 8. It is interesting to note that with the $1.50 shirts shrinkage after 25 washings exceeded that after 3 washings by 1 per cent or more in nearly one-third of the measurements compared, but in only 1 out of 14 measurements with the $2 shirts.

All the shirts except No. 11 claimed to be made of pre-shrunk material. A statement claiming that the fabric will not shrink is of considerable importance to the consumer if it implies equal satisfaction as to size after the garment is washed. Since no standard has been set for so-called pre-shrunk fabrics, uniformity of performance may or may not prevail for garments so marked; and these data show that it does not in the shirts studied.

In the Recommended Commercial Standard "pre-shrunk" is defined as applying to the entire garment when used on a shirt and as indicating a shrinkage not exceeding 2 per cent when properly laundered. Considering shrinkage after 25 washings, only shirt No. 10 meets this definition at every point measured, while Nos. 9 and 11 meet it except for collarband shrinkage, which was nearly 2½ per cent.

Shirt No. 10 was advertised as made of material finished by the Sanforizing proc-

TABLE 3

Percentage shrinkage in shirts after laundering

LABORATORY NO.	NUMBER OF TIMES WASHED	COLLAR BAND	CHEST	FRONT	BACK	ARMHOLE	SLEEVE	
							Width	Length
1	3	3.25	0.56	3.70	3.76	1.17	0.77	0.77
2	3	1.61	3.24	1.48	1.48	1.19	1.54	1.86
3	3	1.63	1.36	1.90	1.90	1.14	0.75	1.07
4	3	3.28	1.09	1.55	1.55	2.27	0.00	1.84
5	3	1.60	1.89	1.86	1.86	0.00	3.13	2.09
6	3	2.40	1.63	0.75	0.75	0.61	0.00	1.05
7	3	2.42	1.63	2.64	2.64	2.33	0.00	2.14
8	3	2.44	0.27	2.21	2.21	2.34	1.45	2.08
9	3	1.60	1.09	0.38	0.38	1.19	1.51	0.36
10	3	0.81	0.54	0.76	0.76	1.16	0.74	1.44
11	3	0.81	0.28	0.74	1.11	0.60	0.00	0.38
1	25	4.88	1.67	5.19	3.76	1.17	0.77	0.77
2	25	3.23	3.78	2.96	2.96	2.38	1.54	2.97
3	25	2.44	1.91	2.66	2.66	1.71	0.75	1.43
4	25	3.28	1.64	2.33	2.33	3.41	0.00	2.94
5	25	3.20	1.89	4.83	4.83	4.14	4.69	2.09
6	25	3.20	2.17	1.89	1.89	0.61	0.00	1.74
7	25	3.23	2.17	3.40	3.40	2.33	0.00	2.86
8	25	4.07	2.44	4.06	4.06	1.75	4.35	3.47
9	25	2.40	1.37	0.38	0.38	1.19	0.00	0.36
10	25	1.63	0.54	0.76	0.76	1.16	1.48	1.44
11	25	2.42	1.11	0.74	1.11	1.20	0.75	1.13

ess, for which a tolerance of 0.75 per cent shrinkage is claimed by Clayton (3). This amount was exceeded in shrinkage of collarband, armhole, and width and length of sleeve, which varied from 1.16 to 1.63 per cent. Shirt No. 9 was claimed by the sales clerk to have been Sanforized but was not so marked. It exceeded the 0.75 per cent tolerance in only 3 places measured; collarband shrinkage was in excess of 2 per cent.

The zero-neckband shrinkage of Simon's perfect shirt (2) was not observed, neckband shrinkage varying from 1.6 to 4.8 per cent. It will be noted that length of collarband showed a consistently high shrinkage in every case. The relation of shrinkage of interlining and stitching to this behavior was not determined.

After 25 washings, sleeves in shirts Nos. 2, 4, 7, and 8 shrank 1 inch or more in length. Only in No. 1 was the absolute shrinkage in length of sleeve confined to the $\frac{1}{4}$-inch limit set by Simon (2).

Character of fabric. Determinations were made of certain physical characteristics of the materials in the shirts studied, the results of which are seen in tables 4 and 5.

Of the $1.50 shirts, two were made of broadcloth woven with 2-ply yarn in both directions, and one of material having 2-ply in the warp only. Of the $2 group No. 11 had 2-ply yarn in both directions. In all other cases single-ply yarn was used for both warp and filling.

In these fabrics the number of warps per inch is significantly related to the number of fillings ($r = 0.871$), but no line of demarcation between the two price groups ($1.50 and $2) was observed. No relation was observed between the use of 2-ply yarn and the number of yarns per inch. In general, the number of yarns per inch increased with shrinkage.

In this connection it might be noted that according to an experienced buyer the term "full count" refers to a broadcloth with 144 warps and 76 fillings per inch, and that cloths finer than this are referred to as "super-counts." Such counts, as quoted in advertisements or by the trade, refer to the count of the unfinished cloth or "in the grey," and are somewhat lower in both directions than a count of the finished fabric. Thus the number of yarns per inch of the finished fabric will to a certain extent be determined by the finishing processes to which the cloth has been subjected.

As regards thickness, the thickest fabric in the $1.50 group had low numbers of warps and fillings per inch, indicating the use of coarser yarns. The thinnest fabrics were associated with higher numbers of warps and fillings per inch in two cases, indicating fine yarns. If thickness is related to size of yarn, shirt No. 9 was made of very closely woven material, since, compared with No. 3 which had equal thickness, it had roughly 20 more warps and 10 more fillings per inch. No difference in thickness was observed in association with a difference in price. In most cases the thickness increased with shrinkage. Among the nine $1.50 shirts a significant negative correlation was found between thickness and

TABLE 4

Ply of yarns, number of yarns per inch, and thickness of materials in shirts

LABORATORY NO.	PLY OF YARNS		NUMBER OF YARNS PER INCH		THICKNESS IN $\frac{1}{1000}$"
	Warp	Filling	Warp	Filling	
1	2	2	134	65	8.5
2	2	2	134	66	9.1
3	1	1	136	70	8.3
4	1	1	133	65	8.1
5	1	1	140	60	9.1
6	1	1	151	81	7.7
7	2	1	128	61	9.3
8	1	1	153	76	7.2
9	1	1	158	80	8.3
10	1	1	138	63	9.6
11	2	2	158	76	7.8

number of warps per inch ($r = -0.654$) and thickness and number of fillings per inch ($r = -0.749$).

Tensile strength of the materials was determined by a strip test and is shown in table 5. The initial strength of the fabrics in the $1.50 shirts varied from 65 to 91 pounds in the direction of the warp and from 20 to 33 pounds in the direction of the filling. Of the $2 shirts one was fairly low in strength in both directions when compared with the $1.50 group, while the other was markedly high in strength, especially in the filling direction. Only Nos. 2, 6, and 7 met the tensile strength standard set by Simon (2), 75 pounds for warp and 50 pounds for filling.

TABLE 5

Tensile strength of shirt fabrics before and after 25 washings and standard deviations in tensile strength of unwashed fabrics

LABORATORY NO.	STRENGTH BEFORE WASHING		STRENGTH AFTER WASHING 25 TIMES		CHANGE		STANDARD DEVIATION	
	Warp	Filling	Warp	Filling	Warp	Filling	Warp	Filling
	pounds	*pounds*	*pounds*	*pounds*	*per cent*	*per cent*		
1	70.7	28.4	80.4	27.1	+13.72	−4.58	21.3292	2.4025
2	91.3	32.5	78.4	30.1	−14.13	−7.38	6.9126	1.5665
3	70.7	24.7	54.3	29.7	−23.20	+20.24	5.1463	3.7828
4	76.1	27.4	60.5	27.1	−20.50	−1.09	4.9158	2.3537
5	80.3	20.3	63.3	22.9	−21.17	+12.81	8.9845	2.1090
6	74.7	31.0	60.9	34.9	−18.47	+12.58	10.8343	1.6425
7	82.0	20.7	75.7	26.3	−7.68	+27.05	13.5480	1.4353
8	71.1	23.3	54.1	25.8	−23.91	+10.73	6.6208	3.7785
9	64.8	27.7	61.3	32.2	−5.40	+16.25	4.7369	4.3287
10	68.2	24.9	61.3	22.7	−10.12	−8.83	4.6702	2.9816
11	85.3	40.5	67.4	43.7	−20.98	+7.90	6.3259	3.6708

After 25 washings all shirts except No. 1 decreased from 5 to 24 per cent in strength in the direction of the warp. At the same time in the direction of the filling Nos. 1, 2, 4, and 10 lost from 1 per cent to nearly 9 per cent in strength, while the other seven increased from 8 to 27 per cent. Three lost strength in both directions, warp and filling losses for No. 10 being nearly equal. Similar changes in strength have been reported by Griffith and Siegert (4). A gain in strength after washing might seem to be related to shrinkage, but the variation in shrinkage data for warp and filling directions, as previously noted, makes such a comparison impossible.

The variation of the individual values for tensile strength as shown by standard deviations is also given in table 5. No two tensile strength samples were cut from the same part of the shirt. While it would not be expected that every part of a given shirt would be cut from the same bolt of cloth, reasonably uniform performance should be expected from all of the several parts constituting a shirt. The present figures, on the contrary, suggest that considerable variation in performance would probably occur in the case of certain of these shirts.

Construction features. Character and uniformity of the machine stitching used are important factors in the appearance of ready-to-wear garments. In the present study the number of stitches per inch was counted at 7 different places on each unlaundered shirt. For the nine in the $1.50 group the mean, minimum, and maximum counts are given in table 6. Since in the

two shirts in the $2 group the minimum and maximum number of stitches did not vary by more than 4 at any point counted, the mean values only are included in the table. In both groups finer stitching was used uniformly on the front plait and collar, with slightly longer stitches on the cuffs.

TABLE 6

Number of machine stitches per inch used on shirts studied

PLACE WHERE COUNT WAS MADE	SHIRTS NOS. 1 TO 9			MEAN FOR SHIRTS NOS. 10 AND 11
	Mean	Minimum	Maximum	
Front plait	21.7	17	25	19.0
Collar	21.7	18	24	19.0
Cuff	20.7	19	23	17.7
Armhole seam	19.8	15	27	15.7
Yoke	17.1	14	20	15.0
Tail hem	15.8	14	18	16.5
Underarm seam	15.6	11	21	15.3

In the lower-priced group three pairs had identical counts on both shirts at all 7 places counted, and two had the same at all but one point. The duplicate specimens of Nos. 2 and 7 showed least uniformity of stitching. Variations in stitching at any one point between two shirts of the same brand varied from 2 to 5 stitches per inch. In the higher-priced group No. 11 had identical stitching at all points counted except the collar, while No. 10 had identical size of stitches on the yoke and tail hem only.

Lock stitch was used for the collar, collarband, cuffs, pocket, and yoke on all shirts. One was sewed with lock stitch throughout. The armhole seams were sewed with chain stitch except on Nos. 6 and 10.

The front plait was uniformly $1\frac{1}{2}$ inches wide except for a $1\frac{5}{8}$-inch plait on No. 9.

The points of the collars were uniform in shape and well matched on every shirt. In No. 9 the two sides of the collar were not uniform in width.

The circumference of the buttoned cuffs varied from $8\frac{3}{8}$ inches to 9 inches in the $1.50 shirts. In the $2 group No. 10 had a $9\frac{1}{4}$-inch cuff and No. 11 an $8\frac{1}{4}$-inch cuff. The cuff plackets varied in length from 5 to 6 inches.

The location of fullness where the sleeve is attached to the cuff is related to comfort and service. In most of the shirts studied this fullness was "bunched" together, although in Nos. 5 and 8 three well-spaced flat plaits were located next to the buttonhole. In Nos. 7 and 11 the fullness was placed approximately on top of the wrist. In No. 10 all of the fullness was crowded into the $1\frac{3}{4}$ inches between the underarm seam and the placket on the underside of the sleeve. With a uniform placket width of $\frac{1}{2}$ inch, the underarm seam was located from $1\frac{3}{4}$ inches to $3\frac{1}{2}$ inches from the button end of the cuff.

The sleeves were not pieced in shirts Nos. 1, 4, 5, 7, and 10. Nos. 2 and 3 had the widest pieced sections and Nos. 6 and 8 the narrowest.

No extra fullness where the back is attached to the yoke was found in shirts Nos. 5 and 9.

The same type of ocean-pearl button was used on all brands except No. 10. In all cases the button on the cuff was larger than those on the front plait. Six buttons only were used on the front of Nos. 3, 4, 7, 9, and 11. No. 10 had 6 on one shirt and 7 on the other, the bottom button having apparently been overlooked. All others had 7 buttons. Six different combinations of crossed and parallel stitches were used in sewing on these buttons. Stitches parallel with the length of plait and of cuff were found on Nos. 3 and 10 only.

Summary. The shirts studied fell into two price groups, and the types of store from which they were retailed represented a considerable variety.

Only one of the nine brands selling at about $1.50 came up to the recommended commercial standard measurements for

men's shirts of this type. No greater conformity to the proposed standard was found for two $2 shirts.

Seven of the $1.50 shirts were labeled "pre-shrunk," but even with a liberal interpretation shrinkage data show that only the one shirt claimed by the sales clerk to be Sanforized could be considered preshrunk; and even for that one the shrinkage was not within the tolerance claimed for Sanforized fabrics. The same statement applies to the $2 shirts. In general the latter shrank less than the $1.50 shirts.

Both single- and 2-ply yarns were used in fabrics in both price groups.

About the same variation in number of warps and fillings per inch and in thickness was found for the two price groups.

Similar values for tensile strength in both directions were found for both price groups and similar changes in strength after laundering.

Smaller stitches were used on the front plait and collar than elsewhere. Uniformity of stitching on duplicate shirts was about the same for both groups.

No outstanding group differences could be observed when comparing shirts purchased from locally owned stores with those from some type of chain store.

None of these shirts entirely measured up to the specifications for a perfect shirt as outlined by Simon.

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PRACTICAL SIGNIFICANCE OF RESULTS

This study shows that there was considerable variation among several brands of white broadcloth shirts selling at about the same price, and suggests that in purchasing such garments special attention should be paid to measurements and shrinkage. Other items to be considered are physical properties of the fabric and construction features of the garment.

BOOKS AND PERIODICALS

NEW BOOKS

Nutrition Work with Children. By LYDIA J. ROBERTS. Chicago: The University of Chicago Press, 1935, 639 pp., $4.

Home economists interested in the growth and health of children—and who of us is not?—will welcome this second edition of Dr. Roberts' combined text and source book *Nutrition Work with Children.* The text of the original 1927 edition has been expanded and in places practically rewritten to keep pace with advances and applications of scientific knowledge in the field of nutrition and health teaching.

Like the first edition, this revision brings together and interprets for students at graduate, college, and normal school levels and for the wider audience of teachers, nurses, social workers, extension workers, and others already engaged in some form of nutrition work with children or parents, the material used in Dr. Roberts' own classes. The author's practice of stating the problem, assembling pertinent data, and evaluating these data as a stimulus and guide makes the book priceless to those who struggle to keep abreast of the subject matter of child growth and nutrition and of sound and effective methods of nutrition-health teaching for children at different ages, at home as well as in school.

The book seems to divide naturally though not formally into three parts. The first nine chapters present evidence of the great need for nutrition work with children and fill in the scientific background. We can turn to them for basic data and reasoned conclusions as to what can be salvaged from or substituted for the use of the now largely discredited weight-height-age tables; effects of undernutrition on the teeth, nervous system, sexual maturity, susceptibility to disease, and mental capacity of children; effects of the depression on the nutrition and health of children; and many other points of great practical importance. This section marshalls old and new proofs to show that with proper prenatal and later care and protection, including optimum diet, children can and do fill out to the uttermost the bounds set by individual and racial heredity and insists that what we need most of all is a vision of what standards our children might attain if we lived up to the nutrition-health information already at our disposal.

The next five chapters, almost a book in themselves, take us into the schools, which claim our children for so many of their formative years. The author's conviction that nutrition teaching is the very core of the school health program leads her to discuss in detail how to plan and carry out a progressive and coordinated program of nutrition-health education and practice "extending from kindergarten through high school . . . suited to the intelligence, interests and needs of the children at the different grade levels, and . . . planned especially to meet the requirements of the particular school and community." Some high lights of these chapters are: the preliminary survey of the school plant and of the children's food and other living habits and physical status; suggestions for the correction of such school "shortcomings" as late hours for school entertainments, candy sales, between-meal "parties" in the classroom, and conditions making for overfatigue; the evaluation of the program as judged by growth criteria, improvement in A C H index and in posture rating, correction of defects, arrest of dental caries, improved dietary habits, and health-knowledge and health-attitude tests; practical procedures for weighing and measuring and the use and interpretations of these data.

The chapter on nutrition teaching at the various grade levels abounds in suggestions based on sound pedagogical principles. Incidentally, it demolishes the "Tommy Turnip"

and fairy story methods of health teaching in the early grades. Favorable attitudes are to be established and the most basic health habits developed through continued practice of the desired procedure rather than through the teaching of subject matter. In the intermediate grades a sound basis of knowledge must be laid for these habits so that the children may intelligently maintain or modify them to meet the changing conditions of afterlife. Twenty pages are devoted to the health needs of high school students and the content and organization of the high school health program. This material together with the discussion of motivating the high school girl to desire and practice health habits should prove extremely helpful to those concerned with the health of high school adolescents.

As a most important factor in the nutrition-health program Dr. Roberts discusses possible contributions of the well-managed school lunch under educational supervision, listing numerous methods and devices for getting the children to understand good food selection and practice it. Home cooperation, the motivation of parents and of children at various ages, and the points for and against special nutrition classes and supplementary feeding are also considered.

The chapter on health materials gives suggestions for a small library for teachers, texts and supplementary readers for children, and classified lists of references and illustrative materials, some of them commercial ones.

The last three chapters deal briefly with the importance and special problems of nutrition work with preschool children, the agencies working for the nutritional betterment of the children, and the parent education movement.

The classified bibliography at the end of each chapter and the excellent 14-page index add much to the value of the volume.—MIRIAM BIRDSEYE, *U. S. Bureau of Home Economics.*

Child Nutrition on a Low-Priced Diet. By MARY SWARTZ ROSE and GERTRUDE M. BORGESON. New York: Bureau of Publications, Teachers College, Columbia University, 1935, 109 pp., cloth bound $1.50, paper bound $1.

Sixty nursery school children, divided into two carefully paired groups, were used as subjects in an experiment to determine the effect of egg as a daily supplement to a low-priced diet. There was striking uniformity in the health progress of the two groups during the twenty-one months of the study. The findings showed in general that children of nursery school age can achieve satisfactory growth and development on a well-planned, very low-priced diet (without eggs) if this diet is administered with regularity and with regard to individual needs. The refinements of the findings showed, however, that an egg a day may be regarded as an additional factor of safety. The egg not only provides extra vitamin A but was shown to increase hemoglobin values and the number of erythrocytes in the blood.

An extra amount of orange juice added daily for six months to a diet already furnishing about 40 or more units of vitamin C per day apparently made no difference in the growth of the children, their general health status, or in hemoglobin or red cell values.

In a subsequent ten-months study, liver was substituted for egg in the same low-priced diet for part of the children to see if liver would have an influence on growth or on hemoglobin and erythrocyte values. No special benefit from the substitution of liver in the amount given could be detected.

Though this study abounds in scientific detail, it is reported in a relatively nontechnical style so that its findings are understandable to all workers in the fields of child development and nutrition.—ROWENA SCHMIDT CARPENTER, *U. S. Bureau of Home Economics.*

Childcraft. Home Edition. Six volumes, with Art Book and Guide. Chicago: W. F. Quarrie & Company, 1935, $38.

Childcraft. Teacher Edition. Six volumes, with Art Book and Guide. Chicago: W. F. Quarrie & Company, 1935, $38.

The aim of these carefully selected, attractively presented collections is to provide children with verses, stories, and pictures which will enrich and delight them and to give authoritative practical suggestions and constructive advice to the elders responsible for their development. The material is arranged in two editions; one of them is primarily for use

in the home, with the advisory sections addressed to parents, while in the other the specific needs of teachers and the groups of children with whom they deal have been kept in mind.

Both editions are alike as to the first three volumes, which are carefully chosen, freely and attractively illustrated compilations of verses, tales, or descriptions whose recognized literary or educational value has stood the test of time or use; these volumes are entitled, respectively, "Book of Verses," "Stories of Fact and Fancy," and "Stories of Life and Lands." Both editions also include the "Art Book," a large-paged, loose-leaf collection of sketches that suggest practicable activities in which children may find opportunity for creative self-expression related to the social information to which they are being introduced in progressive schools; a few pages at the end are devoted to colored reproductions of pictures made by such children. With both editions the publishers also provide a "Guide," whose purpose is to "correlate and harmonize all portions of the set, so that maximum advantage may be obtained from its use."

It is in the last three volumes of the set that the two editions differ. In the Home Edition these are entitled "The Child at Home," "The Child at School," and "The Child at Play"; and in these answers to everyday problems are given by recognized authorities. The corresponding volumes in the School Edition are named "Teachers' Problems," "Better Teaching," and "Activity Units." The first two of the three are edited by Patty Hill, who has assembled apposite and helpful discussions by well-known educators. The last volume deals with the use of activity in learning, and practical suggestions for this in different fields of child interest are contributed by teachers of successful experience.

Whatever may be the value of the anthologies for children or of the volumes of suggestions for their elders as compared with other individual books or shorter series in these fields, no single collection is available which gives so much material in so small a compass at so moderate a price.

The Structure and Composition of Foods. Volume II. Vegetables, Legumes, Fruits. By ANDREW L. WINTON and KATE BARBER WINTON. New York: John Wiley & Sons, Inc., 1935, 904 pp., $15.

The second volume of a comprehensive handbook on the chemistry and microscopic structure of foods, doing for vegetables, legumes, and fruits what the first volume (see JOURNAL, Vol. **24**, 1932, page 548) did for cereals, nuts, and oil seeds.

Accounting and Food Control for Home Economics Students. By NEVA HENRIETTA RADELL. New York: F. S. Crofts & Co., 1935, 270 pp., $3.

Workbook for Accounting and Food Control for Home Economics Students. By NEVA HENRIETTA RADELL. New York: F. S. Crofts & Co., 1935, 169 pp., $2.50.

For the increasing number of home economics students who are training for institution management and who for this must have a knowledge of accounting and business procedure, the author gives well-chosen, well-presented information drawn from her wide experience in food administration and teaching. The "case problems" around which the material is arranged include tearoom, school cafeteria, hospital, college residence hall, and city club. Laboratory exercises are suggested for each type of problem, and for these the workbook and an accompanying set of vouchers provide the necessary record forms.

Some Aspects of Management of College Residence Halls for Women. By GRACE M. AUGUSTINE. New York: F. S. Crofts & Co., 1935, 242 pp., $3.

The study on which this volume is based dealt with important aspects of management as reported by 120 institutions in 1931–32, and the multitudinous facts thus collected have been carefully organized and discussed under the headings of staff, student employees, food service, house service, cooperative units, and budgets—information of a sort much needed by college administrators and by teachers and students of institution management.

Illustrations for Art Training. By MABLE RUSSELL and ELSIE WILSON GWYNNE. Edited by WILLIAM G. WHITFORD. 20

Plates of Line Drawings, Photographs, and Color Reproductions, 12½ x 16 inches. Peoria, Illinois: The Manual Arts Press, 1935, $2.

The plates in this portfolio, two of them in color, have been made from illustrations in the authors' *Art Training Through Home Problems* (annotated in the JOURNAL for May 1934) and are issued in the present form to meet the demand for larger illustrations to be used in classes and demonstrations on art principles or home furnishing and decoration. An accompanying leaflet suggests ways of using them.

Clothes for Girls. Their Selection, Construction, and Care. By ELIZABETH TODD. Boston: Little, Brown, and Company, 1935, 501 pp., $1.56.

Designed for junior high school classes, 4-H clubs, Girl Scouts, and similar groups, this textbook endeavors to confine its material to points within the girls' experience and interests, each of the subjects suggested for study leading to the solution of the student's own problems. The main emphasis is on clothing selection, though some units dealing with simple construction processes are included to give a basis for judging ready-made garments and textile values and to enable a girl to do simple sewing and repairing.

Principles of Adolescent Psychology. By EDMUND S. CONKLIN. New York: Henry Holt and Company, 1935, 437 pp., $3.

The audience here addressed includes the parent, dean, teacher, physician, pastor—anyone who is continually confronted with the task of understanding and interpreting adolescent behavior. The author sees adolescent problems as phases in the growth and integration of personality, and he presents in understandable language many of the factors which influence this development.

Homemaking: An Integrated Teaching Program. By EVELYN M. HERRINGTON. New York: D. Appleton-Century Company, Inc., 1935, 205 pp., $2.

A vivid description of the way in which the homemaking work of a junior high school is integrated with the actual interests and experiences of the students by having them plan and carry on their projects to suit the activities which they themselves decide upon, due provision being made for special practice in skills and for ingeniously devised means of testing their progress toward the goals set by the school. Both the author and the chief of the New York State Home Economics Education Bureau, who contributes "A Word to Teachers," are sure that such a program could be worked out for any school even without a practice apartment, but Miss Van Liew recognizes that it requires an exceptionally able teacher. The practical effect of the plan on the teacher, the school administrator, and on school-home relationships is discussed.

Earning and Spending the Family Income. A Textbook in Home Economics. By MATA ROMAN FRIEND. *Revised Edition.* New York: D. Appleton-Century Company, Inc., 1935, 463 pp., $2.

For the most part the revision of this well-known book remains like the first edition, reviewed in the JOURNAL in August 1930, but insertions have been made to certain sections and to the bibliographical references which follow each chapter, so that it is now in harmony with recent economic and social changes, educational procedures, and publications. The most important additions are to the units on standards of living, consumption, purchase of food, and expenditures for advancement.

Factory, Family and Women in the Soviet Union. By SUSAN M. KINGSBURY and MILDRED FAIRCHILD. New York: G. P. Putnam's Sons, 1935, 334 pp., $3.50.

Thanks to five years of study and one year spent in Russia, a professor and an associate professor of social economics at Bryn Mawr College are here able to give a well-documented account of the development, status, and tendencies of the position of women in post-war Russia. Almost every section raises problems of family relationships, though the ones which deal specifically with housing, standards of living, and the family are perhaps of most direct interest to students of home and family life.

ABSTRACTS

EDUCATION

Contributed by the Home Economics Education Service, United States Office of Education

ADULT

The greatest cooperator, MALCOLM GWYER. *J. Adult Educ.* **7,** No. 1 (1935, Jan.) pp. 28–30.

A brief description of how the head of the Public Library in Denver extended its services through a program of agencies in the city which were actively engaged in various forms of adult education and how the Denver Adult Education Council was formed in affiliation with the Public Library as the central agency.—E. P. A.

A reaffirmation, ALVIN JOHNSON. *J. Adult Educ.* **7,** No. 3 (1935, June) pp. 253–259.

A critical analysis of the difficulties in adult education today in the light of the great need for a more vital form of such education for a democracy.—B. I. C.

Capacities of common men, EDWARD STEVENS ROBINSON. *J. Adult Educ.* **7,** No. 3 (1935, June) pp. 263–268.

There is a danger that the health and strength of adult education will be lost through a temptation to oversell it, to promise too much, "to advocate our remedies as near-panaceas." Those who are interested and have ability should be provided for; until they are, it is undesirable to make it attractive to those who are not interested.—B. I. C.

Home economics in the state schools of agriculture, MARION S. VAN LIEW. *N. Y. State Educ.* **22,** No. 8 (1935, May) pp. 624–626, 669–670.

Most of the pupils who enter these schools are high school graduates. Each school specializes in offering different kinds of vocational or prevocational training in such occupations related to homemaking as care of children, dressmaking, being a student dietitian, working in a cafeteria or lunchroom, and others.—B. I. C.

Training homemakers, MRS. A. D. BATES. *N. Y. State Educ.* **22,** No. 9 (1935, June) p. 708.

The schools have been cooperating with the P.-T.A. in Rockland County in offering a training course for household employees and in organizing an employers' study group. A household code with standardized working conditions is being developed by the study group, and theory and practice in household work are given the students in an intensive eight-weeks course.—B. I. C.

Problems in teaching home economics to adults, GRACE GORDON HOOD. *Prac. Home Econ.* **13,** No. 5 (1935, May) pp. 133–134.

Twelve problems which the homemaking teacher of adults faces are discussed in detail and specific suggestions offered for ways of handling these problems.—B. I. C.

An experiment in training for adult education, MARY WILSON and LOYETTE WEBB. *Prac. Home Econ.* **13,** No. 6 (1935, June) pp. 165, 186.

Summer courses were organized in which day-school teachers were given an opportunity to organize, observe, and teach adult classes and to survey communities for determining needs to be met through class work.—B. I. C.

COLLEGE

The first course in education: introduction or indoctrination, PEDRO T. ORATA. *Educ. Admin. & Superv.* **21,** No. 5 (1935, May) pp. 345–358.

A proposal that beginning courses in education, instead of informing the student of the educational machinery, giving him a bird's-eye view of educational problems or "developing the scientific point of view in education" be organized around issues and conflicting practices so as to help the student formulate a consistent basic philosophy for himself.—B. I. C.

Progressive procedures in graduate study, CLYDE M. HILL. *Progressive Educ.* **12,** No. 5 (1935, May) pp. 352–357.

Describes the program for graduate study in education at Yale, where courses as such are discarded and the work organized around general and special seminars and individual conferences.—B. I. C.

Duplication of effort between high school and college, HENRY C. MILLS. *School Rev.* **43,** No. 5 (1935, May) pp. 363–370.

A study of the accomplishment of high school students in first-semester courses in elementary economics, elementary chemistry, elementary physics, and the second-semester course in American history indicated such an overlapping of high school and college work that the University of Buffalo is making available to superior high school seniors opportunity to use the college outlines and take special examinations and secure credit for these courses if the examinations are passed.—B. I. C.

ELEMENTARY AND SECONDARY SCHOOLS

Art appreciation for children, MILDRED DOW VOSS. *Nat'l Parent-Teacher Mag.* **29,** No 12 (1935, Aug.) pp. 14, 39.

Emphasis is laid on the importance of having parents and teachers understand art principles so that they can help children learn to create beauty with a small expenditure of money and to offset the effects of poor features in environment by building up a basis for evaluating them.—D. S. L.

Come out of the classroom! MARION S. VAN LIEW. *N. Y. State Educ.* **22,** No. 9 (1935, June) pp. 704–705, 747–749.

The community as a learning situation for home economics education furnishes a wide variety of opportunities which the teacher can ill afford to miss. Homes and local stores offer excellent illustrative material for teaching, and the home project may be a real test of the effectiveness of home economics.—B. I. C.

Home backgrounds for school work, ROSE H. ALSCHULER. *Parents' Mag.* **10,** No. 9 (1935, Sept.) pp. 17, 68.

Stresses the importance of understanding children's problems and recognizing that home and school can only function effectively in the child's development if they supplement each other in enriching the child's experience. Children are not adequately understood unless their social, emotional, and physical problems are regarded as having important bearing on their mental achievement.—D. S. L.

The science-type unit, HAZEL SHULTZ. *Prac. Home Econ.* **13,** No. 5 (1935, May) pp. 137–138.

The appreciation type unit, HAZEL SHULTZ. *Prac. Home Econ.* **13,** No. 7 (1935, July) pp. 208–219.

Two articles in the series explaining the application to home economics of two of the types of teaching advocated by Morrison. The basis for decision as to whether a given unit is of a science or an appreciation type is explained and the steps to be followed in carrying these through described.—B. I. C.

GENERAL

How to establish an integrated activity program, FREDERICK PISTOR. *Childhood Educ.* **11,** No. 7 (1935, April) pp. 300–307.

Specific suggestions are given for changing from a formal school program to an activity program, and the characteristics of a worthwhile unit are indicated. The effect of the change on schedules, space, and buying procedures is also discussed.—B. I. C.

Relationships with community organizations, HUBER WILLIAM HURT. *Educ. Method* **14,** No. 8 (1935, May) pp. 422–425.

No real job can be done in educating the child unless all the agencies concerned with his education try to integrate the forces impinging upon his life. The home, the church, leisure-time agencies, the press, the motion picture, the radio, commercial recreation, and selling are among the non-profit and profit agencies which may well be represented in a coordinating council.—B. I. C.

A survey of courses of study published in the last two years, HENRY HARAP. *J. Educ. Research* **28,** No. 9 (1935, May) pp. 641–656.

A study of 263 courses in all subject fields

revealed among other tendencies an increasing recognition of the importance of setting up meaningful goals to give direction to pupil activities, a unit form of organization centered around social experiences and life-like interests, and more emphasis on integration.—B. I. C.

Parent Educ. **2,** No. 2 (1935, May 15).

This bulletin deals with the place and status of education for family life in the colleges and secondary schools. Besides general articles on the history, present status, and philosophy of such instruction, brief descriptions are included of the work as organized in different colleges and schools or school systems.—B. I. C.

The social philosophy of progressive education, WILLIAM H. KILPATRICK. *Progressive Educ.* **12,** No. 5 (1935, May) pp. 289–293.

A critical evaluation of the aims of progressive education in the light of the present social-economic situation. Progressive educators must continue to develop individuality and foster creative intelligence, realizing that drastic changes are needed in the economic system to preserve and extend human freedom.—B. I. C.

Psychological tests. *Rev. Educ. Research* **5,** No. 3 (1935, June) pp. 186–331.

The third critical review of psychological tests issued by the American Educational Research Association. This number reviews research during the three-year period 1932 to 1934 and considers tests of intelligence, aptitude, character and personality, mental hygiene, emotional adjustment, and social attitudes.—B. I. C.

Softness in high-school supervision, C. B. ALLEN. *School Rev.* **43,** No. 5 (1935, May) pp. 350–356.

Six examples of "softness in supervision" as listed by university classes are critically evaluated; and a plea is made for a vigorous professional type of supervision adjusted to a mature, educated, cultured, professionally-minded group of teachers.—B. I. C.

Emotional status of the parents of problem and psychopathic children, EDNA RUHEY LOTZ. *School & Soc.* **42,** No. 1077 (1935, Aug. 17) pp. 239–240.

A study of 112 cases of problem children 8 to 14 years of age showed that 48 cases could be traced to neurotic and diseased heredity, 47 to direct descent from diseased parents. In 64 cases the problems were due to home environments, and 62 of these could be traced to parental maladjustment including such characteristics as unreasoning anger, irritability, excitability, fault finding, unfair judgments of children, quarrelsomeness, hyperemotional and indulgent qualities.—B. I. C.

FOOD COMPOSITION

Contributed by the staff of the Food Composition Section, Bureau of Home Economics, United States Department of Agriculture

The iodine content of potatoes, JESSE FRANCIS MCCLENDON, EARL BARRETT, and THOMAS CANIFF. *Biochem. J.* **28,** No. 4 (1934) pp. 1209–1211.

Although the low-temperature, open-ashing method gave much lower iodine values on Minnesota potatoes than the combustion tube method, it is claimed that a single analyst may use it to obtain fairly consistent results. One analyst using the former method found 174 gammas per kilogram dry matter on 55 samples from Minnesota; those from eastern Minnesota, where goiter incidence is higher, contained less iodine than samples from the western part. Another analyst found 170 gammas per kilogram in 28 samples from North Dakota. Results obtained by different analysts are not regarded as comparable.—C. C.

The available carbohydrate of fruits. Determination of glucose, fructose, sucrose, and starch, E. M. WIDDOWSON and R. A. MCCANCE. *Biochem. J.* **29,** No. 1 (1935) pp. 151–156.

Glucose, fructose, sucrose, and starch were determined in 40 varieties of fruit, including tomatoes. The sum of these was taken to represent the "available carbohydrates" of the fruit. Titratable acidity was also determined. Samples of seven different kinds of fruit were analyzed by the methods used in this study and the results compared with those obtained by the method of McCance and Lawrence, 1929. The lower values formerly obtained were explained by the destruction of fructose when the samples were boiled with hydrochloric acid, the authors assuming that approximately 50 per cent of the fructose was lost in this way. —C. C.

The iodine content of some Georgia vegetables and water as a factor in its variation, K. T. HOLLEY, T. A. PICKETT, and W. L. BROWN. *Ga. Exp't Sta. Bull.* 190 (1935, May) 11 pp.

The water supply during the growing period is shown to have a marked effect on the iodine content of potatoes, turnip tops, and Chinese mustard. Low iodine content of 109 Georgia grown potato samples is believed to be due in part to the drought, as 83 of the samples were from the 1930 crop. Data are given on the iodine in a few samples each of turnip tops, spinach, collards, lettuce, and pimientos. Iodine in most samples was determined by the low-temperature ashing method of McClendon and Remington, 1929. The authors' findings bear out the experience of other workers that losses by this open-ashing method are unaccountably large and that the results are not reproducible in the hands of different workers. The Karns method as modified by von Kolnitz and Remington, 1933, was also used on a few samples but failed to give the exact results expected. Recovery experiments usually accounted for at least 75 per cent of added iodine by the former method and about 85 per cent by the latter. Even with ample allowance for losses, the iodine content of Georgia potatoes was very low, and the authors discuss the relation of these results to the fact that incidence of simple goiter is low in this state. They are in accord with McClendon *et al*, *Biochem. J.* 1934 [see above] that potatoes are "generally too low in iodine for satisfactory use as the basis for a survey" and that a leafy vegetable would be better. "Whatever the relation of the iodine content of the potato to the occurrence of goiter, it is very evident that the iodine content of plants generally is such a variable quantity that a few analyses of a particular crop grown over one or two years may be very misleading."—C. C.

Growth and composition of Deglet Noor dates in relation to water injury, A. R. C. HAAS and DONALD E. BLISS. *Hilgardia* **9,** No. 6 (1935, March) pp. 293–344.

In a study of "water injury" in dates, the chemical composition of date fruits was determined at various stages of development. None of the samples analyzed were mature, however, with the possible exception of the one last harvested. A complete mineral analysis and data on dry matter, total nitrogen, ash, and sugars are reported.—G. A.

FOOD ECONOMICS AND DIETARY REQUIREMENTS

Contributed by the staff of the Food Economics Section, Bureau of Home Economics, United States Department of Agriculture

Milk-borne epidemic diseases in the United States and Canada, S. J. CRUMBINE. *Child Health Bull.* **11**, No. 4 (1935, July) pp. [113]–120.

Reports for the calendar year 1934 from each state and provincial health department and from territorial departments (except Alaska and the Philippine Islands) show 40 milk-borne epidemics involving 1,324 cases and 44 deaths. All but one of these epidemics were caused by raw milk. Seventy per cent of the epidemics occurred during spring and summer, and 74 per cent of the communities were rural or small towns of less than 5,000 population. Typhoid fever was responsible for 53 per cent of the epidemics, 24 per cent of the cases, and 57 per cent of the deaths. Typhoid fever, septic sore throat, and scarlet fever combined were responsible for 83 per cent of the epidemics, 80 per cent of the cases, and 95 per cent of the deaths. In 70 per cent of the epidemics the source of contamination was carriers or cases at the dairy; in 27 per cent, cows.—H. K. S.

Retail food price differences between cities, HENRY B. ARTHUR. Consumers' Division, N. R. A., August 17, 1935.

A comparison is made of retail prices of 41 food articles collected by the U. S. Bureau of Labor Statistics and County Consumers Councils in 7 cities distributed throughout the United States and varying in population from 4,000 to 7,000,000. In general price differences appear more pronounced between cities of different regions than between large and small cities within the same region. Charts show retail prices as of May 7, 1935, classified according to region and size of city.—H. K. S.

A housewife writes the Journal protesting the taxes that are increasing cost of living. *Ladies' Home Journal* **52**, No. 6 (1935, June) pp. 26, 98–99.

An account of how increased food costs, with no increase in family income, lowered the family standard of living in many ways. Meals, although more expensive, were lower in quality. Fewer clothes could be purchased and these of inferior quality. Concerts, movies, lectures, and other such pleasures were of necessity omitted, and less entertaining was done in the home. Visits to doctor and dentist were postponed, and hence the family health hazards were increased. The home deteriorated because necessary repairs could not be made.—M. M. W.

Increased bodily growth in school children since the war, GEORG WOLFF. *Lancet* [London] **1**, No. 17 (1935) pp. 1006–1011.

Children of Berlin, Germany, entering school 1924–32 and leaving 1925–33, have been systematically weighed and measured. The entrants 1924–26 and the leavers of 1932, born during the period of worst deprivation of the German people, showed upon entrance a distinct growth deficit as compared with earlier- and still more with later-born entrants. The retardation of growth apparent in the entrants of 1924–26 was compensated during the next 8 years. Upon leaving in 1932 and 1933 these children were much larger than those who left school in 1925 and 1926. There was a marked increase in rate of growth in the post-war period.—H. K. S.

Height and weight of children of the depression poor, CARROLL E. PALMER. Health and Depression Studies No. 2, *Pub. Health Rep'ts* **50**, No. 33 (1935, Aug. 16) pp. 1106–1113.

From data on economic status collected in a survey by the U. S. Public Health Service and the Milbank Memorial Fund of about 1,000 families in each of 6 cities and from seriatim measurements transcribed from school records of the height and weight of children from the surveyed families, figures were available for about 5,400 children in three economic groups for the period 1928–29 to 1932–33. About 15 per cent of these children were from families whose yearly income equaled $250 or more per capita throughout the 4-year period 1929–33; 40 per cent from families whose yearly income

was less than $250 per capita throughout the period; and almost one-half from families whose yearly income had dropped from more than $250 to less than $250 per capita during the period. For boys and girls from 6 through 9 years of age the average weight for height of children in the "comfortable" group was about 4 per cent greater than the average of all children taken together; children from the "poor" families were 1 to 2 per cent below the weight of all children, while children of the "recently poor" families took an intermediate position. At the beginning of the depression, children in families that were relatively comfortable but who were destined to become poor during the next five years showed very nearly the same relative weight as those in families who were to remain comfortable, and considerably greater than that of children of the poor in 1929. By 1932–33 the weight of the children of the depression poor had fallen to approximately the level of the children of the continuous poor. Children 6 through 9 years of age in the recently poor families did not maintain the same rate of growth during the depression period as did children in the group as a whole.—H. K. S.

Food consumption and use of time for food work among farm families in the South Carolina Piedmont, ADA M. MOSER, *S. C. Agr. Exp't Sta. Bull.* No. 300 (1935, April) 80 pp.

Two hundred and seventy-five detailed records of farm household food consumption were secured in 1932 from 106 white and 53 negro families in 5 counties as a basis for determining what constitutes an adequate diet in terms of customary foods in the area in question, what proportion may be produced at home, and what the equivalent cost would be if all food were purchased at nearby trading centers. Seven-day records at each of two seasons were obtained from most families. The records were classified by season, level of money value of food, and nutritive value of diets; and for each classification there is presented the quantities of different types of food consumed, its nutritive value, and its retail money value. At 1932 price levels the white farm family diets that were considered adequate had a money value of about $87 per capita per year—an amount between that of the minimum-cost and moderate-cost adequate diets suggested in the U. S. Department of Agriculture Circular 296—whereas the average adequate negro family diet had a money value of $72.50, approximately that of the minimum-cost diet. The adequate white family food supply included more cereals, milk, and sugars than either of these two suggested diets but less of tomatoes, citrus fruits, and potatoes. In other items they were between the two. Home-produced food contributed, on the average, about 83 per cent of the retail money value of the food supply. The families studied bought more than half of their refined flour and cereals, fats other than butter, and all citrus fruit, coffee, and other adjuncts; they produced 80 to 100 per cent of other foods.

Weekly records of time spent in household activities relating to food were obtained from 115 white families and 70 negro families. In white farm households which had an average of 6.74 full-time individuals at meals, 31.3 hours were spent in household food work and 20.1 hours on the farm in activities directly connected with food production for home use. In negro households with an average of 7.32 full-time individuals the corresponding figures were 25.4 and 18.4 hours. In white households adequate diets did not consistently require more time for food activities than inadequate diets; but negro households with adequate diets spent more time in production of food for home use than did negro households whose diets were inadequate.—H. K. S.

FOOD UTILIZATION

Contributed by the staff of the Food Utilization Section, Bureau of Home Economics, United States Department of Agriculture

Antioxidant properties of vegetable lecithin, EVERETTE L. EVANS. *Ind. & Eng. Chem.* **27,** No. 3 (1935, March) pp. 329–331.

A lecithin preparation obtained from soybeans and consisting of lecithin and cephalin was found to be effective in preventing the development of rancidity in cottonseed oil. Lecithin inhibited the formation of peroxides in cottonseed oil to a greater extent than did sitosterol, stigmasterol, hydroquinone, or diphenylguanidine. Cottonseed and soybean oils to which 0.1 per cent and 0.05 per cent lecithin had been added withstood oxidation for 4 months when kept at room temperature. —W. G. R.

Relationships of the physical and chemical characteristics and constants of lard to its culinary value, P. MABEL NELSON, BELLE LOWE, W. F. COOVER, and J. H. BUCHANAN. *Iowa Agr. Exp't Sta. Rep't on Agr. Research* (1934) pp. 147–149.

Forty-nine prepared lards and 17 commercial fats and oils were chemically examined and subjected to various cooking tests. There was no apparent relationship between shortening value of the lards and the iodine number, the percentage of free fat acids, or the melting point. With the commercial fats and oil there was some relation between shortening value and iodine number.—R. L.

Proper processes for home canners, F. W. TANNER. *J. Am. Dietetic Assoc'n* **11,** No. 1 (1935, May) pp. 18–27.

The author discusses methods for home canners issued by different agencies—U. S. Department of Agriculture, state extension service, and manufacturers of home-canning equipment—and shows that much of this information has no scientific basis. Processes in pressure cooker, water bath, and oven are compared for non-acid foods, and the water bath and oven are shown to be inadequate and dangerous. Advisers to home canners are urged to protect public health by issuing only information based on scientific research.—M. C. S.

A comparison between eggs frozen at zero Fahrenheit and eggs frozen at −109°F., T. L. SWENSON and LAWRENCE H. JAMES. *U. S. Egg & Poultry Mag* **41,** No. 3 (1935, March) pp. 16–19.

Part of one lot of eggs was held 18 hours at 40°F. and then frozen slowly; the other part was frozen rapidly at −109°F., with the air of dry ice. Bacterial counts indicated that the rapidly frozen eggs were superior to those frozen at the higher temperature.—W. G. R.

How quality in poultry meat is affected by the distribution of fat in the carcass. A study of nutritional factors influencing quality as the consumer finds it, W. A. MAW. *U. S. Egg & Poultry Mag.* **41,** No. 5 (1935, May) pp. 32–36.

Determination of the amount of fat deposited in the flesh (breast and leg muscle) and skin of chickens receiving different kinds of grain demonstrated that fat deposited in the flesh of the bird decreased to different extent and in the following order: corn, barley, oats, wheat. This order was reversed, however, for fat deposited in the skin. Chemical analyses indicated that fat deposited in the muscle replaces moisture. Palatability tests proved that cooked meat from birds fed corn or barley had better flavor and texture and was more moist than meat from birds fed wheat or oats.—W. G. R.

Blackening of potatoes during cooking due to lessening protein stability, R. NAGY and W. E. TOTTINGHAM. *Wis. Agr. Exp't Sta. Bull.* 428 (Ann. Rep't of Director, 1932–3) (1934, June) p. 29.

This preliminary report shows that blackening is due to a weakening of the structure of proteins. In the absence of air the potatoes did not turn black. The compounds causing discoloration, tryptophan and tyrosine, can be removed by preliminary soaking of the tubers. In greenhouse trials with potato plants subjected to drought followed by renewed water supply no increase in tryptophan content was found.—R. L.

THE HOUSE, ITS EQUIPMENT AND MANAGEMENT

Concrete, A. McK. Stires. *Am. Architecture* **147,** No. 2636 (1935, Aug.) pp. 70–82.

Concrete is shown to possess architectural aspects worth wide consideration beyond its well-known structural value. Developments in form, texture, and color are discussed, with photographs and technical details.

Tests endorse aluminum priming, R. I. Wray and J. D. Edwards. *Am. Builder* **57,** No. 8 (1935, Aug.) pp. 54, 56.

Results of a four-year test to compare the performance of aluminum paint as a primer with other common systems of painting, in which practically every species of wood used commercially for siding purposes was used, show superior performance for the aluminum primer under all conditions.

Wasteful slums into civic assets, M. R. Frisbie and F. W. Fisch. *Am. City Mag.* **50,** No. 3 (1935, March) p. 53.

A brief outline of Schenectady's plan for parking areas and traffic relief as a by-product of its slum clearance and municipal housing authority activities.

Baking characteristics of gas and electric ranges, R. M. Conner. *Am. Gas Assoc'n M'thly* **17,** No. 3 (1935, March) pp. 102–104.

From a laboratory study of gas and electric ovens it is concluded (1) that electric ovens give less uniform baking results because of uneven temperature distribution of radiant heat; (2) that temperature regulation of electric ovens is relatively ineffective, varying as much as 50°F.; (3) that slightly less shrinkage occurs in gas ovens, probably due to the more uniform temperatures maintained; (4) that continued use of electric top heating elements results in their reduced efficiency. Analysis of all these related factors indicates that the gas range oven bakes more uniformly, affords more accurate temperature control, and results in slightly less food shrinkage.

Comparative effects of utensil variations on gas and electric range top unit efficiency, F. O. Suffron. *Am. Gas Assoc'n M'thly* **17,** No. 4 (1935, April) pp. 159–161.

Data obtained by a study of the comparative effect of variations in utensils on gas and electric range efficiency show that the efficiencies of open-top gas burners are not affected by such utensil variations as bottom contour, absorptivity coefficients, and reasonable differences in heights and diameters. With electric range top elements, maximum efficiency is obtained only when bottoms of utensils possess a high coefficient of absorptivity and the side walls, a low coefficient, and when the diameter of pan and element are almost identical and the side height is low. If a solid unit is used both surfaces should be plane to insure close contact. Thus special utensils should be used to secure efficient utilization of heat with electric units, while practically all types of utensils are efficient on open gas burners.

The Laboratory Approval Seal—its proper use and promotion, E. R. Acker. *Am. Gas Assoc'n M'thly* **17,** No. 7 (1935, July) pp. 248–249.

Outlines the reaffirmed policy of the American Gas Association that its official Laboratory Approval Seal represents minimum standards of safety, durability, and efficiency for usable gas appliances and that appliances which cannot pass these tests are not fit to be sold or used. The seal is not intended to imply quality in an elastic sense.

Social changes during the depression and recovery. Social adjustments in cities, Niles Carpenter and Clarence Quinn Berger. *Am. J. Sociol.* **40,** No. 6 (1935, May) pp. 729–736.

The country-to-city movement has been checked by the depression, but whether permanently or temporarily cannot be foreseen. Many cities are financially insolvent, due to bad management and/or heavy relief expenditures. Housing problems have been intensified by the decline in residential building. In 257 cities the value of building permits dropped 92.8 per cent from 1925 to 1933. The 1934

federal Real Property Inventory showed that in more than half of 63 cities the margin of vacancies above families was under 1 per cent. Crowding was found in 14.3 per cent of the dwelling units enumerated.

Moderate-cost house construction and equipment. *Architectural Record* **78,** No. 2 (1935, Aug.) pp. 101–144.

A series of illustrated descriptive articles on recent developments in construction methods which include the Forest Products Laboratory's prefabricated house, a comparison of various wall constructions, precast mosaic concrete panels, a fireproof framing of sheet metal filled with gypsum and wood fiber, gypsteel plank for floors and roofs, the microporite house, motohome, Berlay steel frame house, cellular copper-bearing steel frame house, porcelain steel house, steelax and other steel framings.

Heating the small house, T. F. ROCKWELL. *Architectural Record* **78,** No. 2 (1935, Aug.) pp. 131–136.

A check list covering insulation, heating methods, fuels, and utility room.

Electricity for the house, H. L. LOGAN. *Architectural Record* **78,** No. 2 (1935, Aug.) pp. 137–144.

A check list of optimum electrical facilities for a six-room dwelling, with charts and illustrations.

A concrete house costing $2,500, F. H. BISSELL. *Architecture* **71,** No. 6 (1935, June) pp. 339–342.

Pictures and describes an interesting small house of concrete blocks in which the "keeping room" combines living room, dining room, and kitchen. A brick recessed range serves for cooking, water heating, and warm-air heating.

New process makes wood non-shrinkable. *Automotive Ind.* **72,** No. 23 (1935, June 8) p. 763.

A Forest Products Laboratory process makes seasoning of green wood unnecessary by treating it with an intermediary solvent, "Cellosolve," which is injected into the wood replacing the water and which in turn is replaced with melted wax. Wood so treated retains its natural size regardless of wide moisture changes.

Modern lighting systems set new high standards. *Bldgs. & Bldg. Mg't* **35,** No. 2 (1935, Jan.) pp. 62–67.

There are three principal types of lighting units available: direct, semi-indirect, and indirect. A large quantity of light is not in itself synonymous with good lighting. Elements to be considered in designing an effective lighting system are: intensity of illumination required, type of lighting equipment, adequate wiring, and location of outlets. The article includes a rating system of judging the relative merit of different lighting units.

Mechanical refrigerators—some are pretty good. *Consumers' Research Bull.* **1,** No. 6 (1935, April) pp. 20–23.

Thirteen different models of widely advertised mechanical refrigerators tested under a wide range of operating conditions showed great differences in performance, cost of operation, and durability. Descriptions of the models tested, their price and performance, and their classification as recommended, intermediate, or not recommended, are given.

Electric house heating, JOHN BACKUS. *Elec. West* **74,** No. 6 (1935, June) pp. 128–132.

A comprehensive study which leads to the conclusion that house heating by electricity is not practicable except as an auxiliary service where a little additional heat is required.

Value of good lighting. *Electrician* [London] **114,** No. 2978 (1935, June 28) p. 864.

Some 800 visitors tested at the recent National Electrical Exhibition indicated that their preferred illumination value for reading was 125-foot candles, a figure at least 10 times that usual in homes. An improved type of study lamp with reflector-diffuser was favorably received.

Dwelling conditions in sixty-four cities. *Fed. Home Loan Bank Rev.* **1,** No. 9 (1935, June) pp. 324–327.

Data obtained by a survey of 64 representa-

tive cities show that single-family dwellings predominate in all the cities; that 7.8 per cent of the total dwelling units were vacant, that the occupied units were in better condition than the vacant, but that about 45 per cent of the former were in need of minor repairs while 39 per cent were in good condition; that there is evidence of sufficient "doubling" of families to result in a housing shortage if they "undoubled"; that 54 per cent of the one-family dwellings were mortgaged; that frame construction predominated (83.5 per cent); that nearly half of the one-family houses contained 5 to 6 rooms; that more than half the units rented for $20 or less per month, 80 per cent for less than $30; that nearly 75 per cent have been built more than 10 years; and that 90 per cent of the owners occupied one-family houses valued at less than $7,500, 65 per cent, at between $2,000 and $7,500.

National policies governing the testing of gas appliances, STEPHEN LACEY and C. A. MASTERMAN. *Gas J.* [London] **210,** No. 3758 (1935, May 29) pp. 531–537.

A survey of the policies concerning testing gas appliances in the United States, Germany, France, Switzerland, and other countries, and the technical standards adopted, with proposals submitted for adoption in Great Britain.

23 gas-burning appliances get ASA approval. *Ind. Standardization* **6,** No. 3 (1935, March) pp. 53–54.

Standard requirements for 6 additional kinds of accessories for use with gas-burning appliances have been approved by the American Standards Association. These are "Listing Requirements" rather than "Approval Requirements," unqualified approval not being given for this type of equipment because successful operation depends in part on the manner of their installation.

The relation between housing and health, R. H. BRITTEN. Reprint No. 1656 from *Pub. Health Rep'ts* **49,** No. 2 (1934, Nov. 2) 13 pp.

"In the light of recognized excess of sickness and mortality in slum areas, an attempt has been made to trace the specific directions in which poor housing affects health. They . . . include impure water supply, insanitary toilets, lack of private toilets, lack of sewer connections, overcrowding, lack of light, lack of ventilation, dilapidation, and others. The occurrence of these conditions in slum areas and the consequent effect on the inhabitants are discussed." Since European data show a reduction of mortality associated with rehousing, poor housing may be considered a public health as well as a sociological problem.

How to lay and maintain linoleum, C. H. JEFFERSON. *Quart. Bull. Agr. Exp't Sta. Mich. State Coll.* **17,** No. 4 (1935, May) pp. 182–185.

Directions are given for the proper laying and maintenance of linoleum, upon which depends its satisfaction as a floor covering. Neglected linoleum should be treated with a penetrating and sealing finish which fills the pores and closes them to dirt and moisture without destroying its flexibility. Three-year service tests indicate the superiority of this method, using Dura Seal, Pyra Seal, or Permatite.

Uses of rubber in the home, M. E. LERNER. *Rubber Age* **37,** No. 4 (1935, July) pp. 187–190.

An interesting review, with illustrations, of the innumerable rubber articles recently developed to simplify housework.

Paints in transition, P. H. SMITH. *Sci. Am.* **152,** No. 4 (1935, April) pp. 192–195.

An authoritative review of the experimental development of new substances (synthetics, notably resins; solvents; rubber bases; soybean and fish oils; aluminum and titanium pigments) to produce better paints for specific purposes and at prices within the consumer's reach, a goal considered attainable.

Ready-made houses, PHILIP H. SMITH. *Sci. Am.* **153,** No. 2 (1935, Aug.) pp. 66–69.

A comprehensive review of the basic accomplishments now achieved for prefabricated houses and the difficulties yet to be overcome in their production and wide acceptance.

H. R. H.

TEXTILES AND CLOTHING

Contributed by the staff of the Division of Textiles and Clothing, Bureau of Home Economics, United States Department of Agriculture

Fading of dyeings in radiation of different intensities, WILLIAM D. APPEL. *Am. Dyestuff Rept'r* **24,** No. 11 (1935, June 3) pp. 306–311, 314.

Seven selected dyeings were exposed to the radiation of a glass-enclosed carbon-arc lamp at distances from the arc selected to give intensities at the sample equal to that in the Fadeometer and to 0.3, 0.1, and 0.02 of that intensity. It was found that the time of exposure required to produce a given amount of fading at intensity 0.1 may be anywhere from 10 times to only 2 times that required at intensity 1. Thus the relative fastness to light of dyeings when exposed at one intensity, for example, that of noon sunlight, is not their relative fastness when exposed at another intensity, for example, that of diffused daylight in a room. The rate of fading of some dyeings is not affected by a change in the relative humidity of the surrounding atmosphere of from 75 per cent to 31 per cent, but the rate of fading of others may be retarded by a factor of 2.—R. E. E.

Textile arts of the Guatemalan natives. *Carnegie Institution of Washington, News Service Bull.* **3,** No. 20 (1935, Feb. 3) pp. 159–168.

This booklet describes and illustrates Guatemalan fabrics, designs, and garments observed and collected by Ruth Reeves, well-known textile designer who under the sponsorship of the Carnegie Institution and the Carnegie Corporation of New York spent several months with Guatemalan people studying the fabrics they produce. The collections of textiles and costumes which she assembled and which are supplemented by specimens of hand-printed and woven fabrics designed by Miss Reeves to suggest Guatemalan work, are being routed to museums of various cities in this country and Canada.—B. M. V.

Das bäuerliche Kleid vor 3500 Jahren [Peasant dress 3500 years ago]. *Die Deutsche Landfrau* **28,** No. 12 (1935, June) pp. 357–359.

Clothing and ornaments of German peasants of the Bronze Age, i.e., about 3500 years ago, have been studied at the Neumünster Industrial Museum. The garments were woven in one piece on a curved loom, were of wool with some deer hair interlaced, and were undyed. The clothing of the Bronze Age is considered to be of pure Germanic origin, but the brilliantly dyed garments of the Iron Age, some 1500 years later, show Roman influence. The accompanying illustrations show garments, ornaments, and looms handed down from both periods.—A. H.

The effect of certain vat dyes on cellulose when exposed to light and atmospheric influences, C. M. WHITTAKER. *J. Soc. Dyers & Colourists* **51,** No. 4 (1935, April) pp. 117–126.

Curtains dyed with vat dyes were found to deteriorate more slowly as the shade became deeper. Since photodegradation is a surface phenomenon, curtains of a net construction became tender faster than those which were closely woven. When wind was allowed to blow through the curtains the degradation increased. The sun faded awnings placed at an angle of 45° more than it faded those placed in a horizontal position, while it faded the latter more than those in a vertical position. —R. E. E.

New discoveries relating to the theory and practice of wool dyeing, L. P. RENDELL and H. A. THOMAS. *J. Soc. Dyers & Colourists* **51,** No. 5 (1935, May) pp. 157–172.

Agitation of the dye liquor during the dyeing of wool was found to cause a more rapid and complete penetration of all classes of dyes into the material than did quiescent conditions, while the use of temperatures lower than the normal boil reduced the loss in tensile strength produced by the dyeing operation. This indicates that bubbling air into dye liquors kept at low temperatures gives good dyeing results. It also suggests the advantage of dyeing at reduced pressures, since then both the agitation resulting from boiling and the low temperatures are obtained.—R. E. E.

The measurement of the air permeability of fabrics, F. H. CLAYTON. *J. Textile Inst.* **26,** No. 6 (1935, June) pp. T171–T186.

An apparatus is described in which the rate of flow of air through fabrics is used for measuring air permeability. The effect on air permeability of cloth structure, finishing treatment, laundering, and relative humidity was studied. It was found that the air permeability of any particular type of cloth cannot be given with great accuracy because small changes in yarn and cloth characters produce considerable variations in permeability. All finishing processes except breaking treatment tended to reduce air permeability. An unproofed gabardine was less permeable than the proofed fabric when wet.—M. B. H.

Analysis of textiles for cellulose-acetate rayon, silk, regenerated-cellulose rayon, cotton, and wool, RALPH T. MEASE and DANIEL A. JESSUP. *Nat'l Bur. Stand. J. Research* **15,** No. 2 (1935, Aug.) pp. 189–198.

A method is described for the quantitative determination of cellulose-acetate rayon, silk, regenerated-cellulose rayon, cotton, and wool in textiles containing two or more of these fibers. The fabric is first extracted with carbon tetrachloride and then desized with a starch- and protein-hydrolyzing enzyme. Acetate rayon is removed with acetone and silk and regenerated-cellulose rayons with solutions of calcium thiocyanate. Cotton and wool are determined either by removal of cotton with aluminum chloride and heat to leave the wool, or by dissolving the wool in potassium-hydroxide solution to leave the cotton. The method gives the percentage of each fiber in the mixture to within 2 per cent of the weight of the sample analyzed.—J. D. G.

A basis for a performance specification for women's full-fashioned silk hosiery, HERBERT F. SCHEIFER and RICHARD S. CLEVELAND. *Nat'l Bur. Stand. Misc. Publ.* M149 (1935, April) 14 pp.

One hundred and eleven samples representing 32 brands of hosiery were purchased from 14 retail stores and analyzed. Brand, retail price, appearance, and construction were found to be inadequate guides to the performance of stockings as indicated by the hosiery testing machine. The physical characteristics of the upper part of the stocking leg were measured under repeated stretching. Minimum limits for "distensibility," "recoverability," and "stretch-endurability" of the stocking, a classification of hosiery based upon the thickness of two layers of fabrics, tolerances for size and length, and a requirement for color fastness to laundering are recommended for use in a performance specification for women's full-fashioned silk hosiery. —M. B. H.

Drum-and-sawdust process for cleaning furs, ROY DENNEY. *Nat'l Cleaner & Dyer* **26** (1934, March) 34 pp.

Dry cleaners are adopting the drum-and-sawdust method (running the fur in a closed drum containing sawdust to which a dry-cleaning solvent has been added) in preference to the immersion process; and furriers recommend it because it does not dry out or tender fur pelts as does the immersion method.—B. M. V.

Physical properties of 44 representative household and camp blankets, MARGARET B. HAYS and BESS M. VIEMONT. *Rayon & Melliand Textile M'thly* **16,** No. 5 (1935, May) pp. 276–278; No. 7 (July) pp. 390–392, 397.

Analyses of 15 all wool, 22 wool and cotton, and 2 wool and silk blankets indicate that there is a wide range in the physical properties of blankets now on the market. The tensile strength was found to vary greatly, particularly in the filling direction. The wool and cotton blends generally were more resistant to abrasion than all wool. The air permeability was lower for the camp and service blankets tested than for the household blankets. No one blanket was consistently high or low in all properties. As shown by this study, it is necessary at present to select blankets that have one outstanding quality such as warmth or light weight and still meet certain minimum requirements in other properties such as thickness and tensile strength. [Some of the data from this report are included in U. S. Department of Agriculture Leaflet No. 111, noted on page 470 of the September JOURNAL.]—R. E. E.

Ringless hosiery problems, D. B. GADDY. *Rayon & Melliand Textile M'thly* **16,** No. 6 (1935, June) pp. 346–347.

Only a small portion of the silk crop is sufficiently even to produce ringless hosiery. This expensive material must be used in fine-gauge, high-priced hosiery. Since the methods of reducing the ring effect are unsatisfactory as well as expensive, the writer suggests that the necessary cost of additional care in selecting, assorting, and blending the silk cocoons be paid to the producer.—K. M. D.

New ways of preparing an "artificial silk" from natural silk wastes. FREYTAG. *Rayon & Melliand Textile M'thly* **16,** No. 6 (1935, June) p. 350.

A German invention makes it possible to obtain an artificial silk thread from wastes of natural silk manufacture. The silk residues are treated with liquid ammonia, and the silk fibroin material remaining after the evaporation of the ammonia is dissolved in water. In the presence of an aqueous salt solution the fibroin solution can be spun into a thread having properties very similar to those of natural silk.—K. M. D.

Further studies on the effect of sunlight on the strength and color of cotton fabrics, MARY ANNA GRIMES. *Tex. Agr. Exp't Sta. Bull.* No. 506 (1935) 42 pp.

Continuing a similar study of 22 cotton fabrics previously reported in Bulletin No. 474, 35 cotton fabrics, including broadcloth, chambray, Everfast gingham and suiting, Meadow Lane gingham, and Bluebird nainsook in white and in colors were exposed to sunlight under normal conditions of temperature and humidity for a total of 500 hours. All fabrics were analyzed before exposure and after intervals of 25 hours of exposure to determine changes in strength and color. Thick, heavy fabrics were found to offer greater resistance to the penetration of light and to be less tendered than thinner ones. Mercerization seemed to increase the resistance of the broadcloth and Everfast suiting but sizing apparently had little effect. Blue, lavender, yellow, and green offered some protection against tendering, while pink accelerated the action of light. The hours of exposure had more effect upon loss of strength than did temperature and humidity; temperature accounted for 3 times as much change as did relative humidity. It was found that exposure to sunlight affected the color of all the fabrics, but that it is possible to secure colored cotton fabrics which undergo only slight changes in color and which retain much of their original strength even after 500 hours of exposure. The conclusion was reached that it is reasonable to require fastness of 100 hours exposure to sunlight without perceptible color changes.—M. B. H.

Textile-Cellophane and "Fliro" yarns. *Textile Recorder* **52,** No. 624 (1935, March 15) p. 23.

Cellophane is entering the textile field. Cut into very narrow strips it is widely used in trimmings, hat braids, ribbons, belts, cords, knit goods, etc. A new fiber bearing the tradename Fliro is cut from Cellophane and can be spun with wool, cotton, and other fibers to produce a variety of novel yarns. Under the microscope Fliro fibers show sharp edges with fine teeth. These result in a peculiar refraction of light. Because of this special structure, Fliro fibers combine well with other fibers to produce a wire hair effect that is fast to wear and not removed by brushing.—B. M. V.

Degradation of silk fibroin by acid and alkali, E. C. WALDE and R. EDGAR. *Textile Research* **5,** No. 10 (1935, Aug.) pp. 460–466.

As silk is frequently subjected to acid and alkaline solutions during fabrication and use, the degradation of silk fibroin and of wild silk fibroin in alkali and in acid was studied. The weight and nitrogen of fibroin were found to decrease very similarly upon hydrolysis and to be logarithmic functions of the concentration of the hydrolytic agent. The mechanical failure of the fibroin was greater than the loss of weight or nitrogen. Alkali deteriorates silk more than acid and wild silk fibroin is more resistant to acid or alkali than silk fibroin.—R. E. E.

MISCELLANY

Canadian Consumers' Guide. The Dominion Department of Agriculture in Ottawa has issued a little folder entitled "The Consumer's Guide on How to Buy Graded Foods," which is intended primarily for homemakers. It gives simple definitions of the grades under which eggs, poultry, canned and fresh fruits and vegetables, maple sugar and sirup, honey, butter, and beef are sold in Canada and urges buying by grade as an indication of quality.

Federal Meat Standards in Schenectady. Beginning August 1 Schenectady followed the lead of Seattle in requiring that all meat sold in the city be classified, graded, and marked according to the rules and regulations of the U. S. Bureau of Agricultural Economics. In fact, it went Seattle one better in adding veal and pork to the latter's list of beef, lamb, and mutton. Several other cities are reported to be considering similar ordinances.

Low Cost Special Diets. The bulletin "Low Cost Special Diets for Adults" prepared by a joint committee of the Dietitians Association of Philadelphia and the Pennsylvania State Dietetic Association was revised last May, and the new edition is now obtainable from Dr. Marion Bell, Temple University, Philadelphia, at 25 cents a copy.

"Feeding College Students on a Co-operative Basis." Bessie Brooks West is the author of a bulletin which presents carefully considered plans for a cooperative residence hall, a cooperative food service in a college cafeteria, and a sorority and fraternity food service as worked out at the Kansas State College of Agriculture. It is issued as Bulletin No. 8 of the Division of Home Economics.

Teacher Tenure. At the request of the tenure committee of the N.E.A. the research division of the latter has made a study of recent court decisions on questions of teacher tenure, the results of which are now available in pamphlet form from Association headquarters, 1201 Sixteenth Street, Washington, D. C., at 25 cents a copy. The division has also brought up to date its mimeographed bibliography on "Tenure and Contractual Status of Teachers."

Bibliography of Household Furnishings. Ruth W. Crooks is the author of a 32-page, classified, briefly annotated list of references to different types of household equipment which appeared between 1930 and March, 1935. It is a companion pamphlet to the author's *Bibliography of Household Equipment* noted on page 112 of the February JOURNAL, and may be obtained from George W. King Printing Co., Baltimore, Maryland, for 25 cents a copy.

Home Economics in Adult Education. A small group of carefully selected leaders in education and home economics met at the School of Domestic Arts and Sciences, Chicago, at the close of the A.H.E.A. meetings last June. Their discussions took up the history, purpose, and methods of adult education and the place of home economics in a program for women, possibly also for men, outlined the desirable characteristics of such a program, considered approach and method, and discussed both the demand for and the difficulties in the way of such a program. A limited number of mimeographed copies of the brief report of the conference is available from Miss Lita Bane, Division of Cooperative Extension, U. S. Department of Agriculture, Washington, D. C.

Bibliography on the Spanish Home. Easily available descriptions and illustrations of Spanish domestic architecture, household furnishings, and household equipment are listed in a mimeographed bibliography prepared by Esther J. and Ruth W. Crooks and obtainable from the Book Store, Goucher College, Baltimore, Maryland, for 60 cents a copy. The junior author was formerly professor of home economics at Tennessee College.

"Neighbors at the Grocery Store." This is the title of a little skit on good buying practices which Ella M. Johnson, foods and nutrition specialist in the North Dakota Extension Service, prepared for the homemakers clubs of that state and which would be appropriate for use in consumer education programs elsewhere. Mimeographed copies may be obtained from the Extension Service of the North Dakota Agricultural College, Fargo, North Dakota, for ten cents each.

NEWS NOTES

GENERAL

American Education Week. November 11 to 17 will be the days devoted especially to consideration of education in the United States this year. "The School and Democracy" is the theme, and handbooks, posters, stickers, and other program helps may be obtained from the National Education Association, 1201 Sixteenth Street, N.W., Washington, D. C.

American Child Health Association. Decision to discontinue the Association was made by the executive committee at a meeting in August, because the aims and purposes for which the Association was organized have been, in large part, accomplished, especially by developments in federal, state, and municipal agencies, and because there are at present "far too many agencies working in the same field." The Association, it will be remembered, was organized shortly after the War by Herbert Hoover, who served first as active and later as honorary president. Dr. Samuel McCune Hamill was the last president, and headquarters were in the RCA Building, Rockefeller Center, New York City.

Associated Country Women of the World. The third triennial meeting of this affiliation of some 75 rural women's organizations in 40 nations will be held in Washington, D. C., the week of June 8, 1936. Grace E. Frysinger is chairman of the committee in charge of the meeting, and is working with London headquarters in developing plans. So, too, are Canadian representatives, who hope that a visit to their country can be included in the program.

Association of Teachers of Domestic Subjects. The annual conference was held on May 25 at Gloucester in connection with the reunion of the Gloucestershire College Old Girls' Guild. Lady Cripps, the president, paid special tribute to the college and its development, which included a beautiful new hostel. Dr. Helen Wodehouse, mistress of Girton, spoke on "The Philosophy of Homemaking," and Dr. F. H. Spencer on "Citizenship and Domestic Subjects." On the platform was Miss Pycroft, who founded the Association in Gloucester 38 years ago. It now has a membership of 3,000. The present chairman is Miss C. A. Bright, "responsible to the London County Council for the work of 460 teachers."

Association for Childhood Education. Two thousand delegates attended the 42nd annual convention of the Association in Swampscott, Massachusetts, June 26 to 30, 1935. "How Today's Teacher Can Meet Modern Problems" was the keynote of the program, which included 11 morning study classes. The newly elected president is Helen M. Reynolds of Seattle.

Interpretation of American Scene. This was the theme of this year's Institute of Public Affairs held at the University of Denver June 18 to August 28. There were 5 ten-day sessions devoted respectively to lectures and round-table discussions on education, economics, government, sociology, and philosophy. Topics under education included adult and parent education, planning for leisure, and backgrounds for teaching the social sciences.

CBS Psychologist. The Columbia Broadcasting System has secured the services of Dr. Arthur T. Jersild of Columbia University, a recognized authority on child training, as consultant in developing higher standards for children's programs.

ALABAMA

Alabama College. The second Student Career Conference, held at the college from July 11 to 13, was attended by high school seniors in the upper fourth of their class from all sections of the state. Helen M. Voorhees, vocational counselor at Mount Holyoke College, who was the conference leader, discussed "Vocational Opportunities for Women Today," "You and Your Job," and "A Career as a Means of Self-

Expression." Fourteen round-table discussions were held for the students, and individual conferences were arranged for them following occupational, personality, and intelligence tests. Dr. Hallie Farmer headed the committee in charge.

IDAHO

Idaho Home Economics Association. Increased associate membership is one of the Association's aims during 1935–36. The executive council will meet early this fall to make plans whereby all home economics women not actively engaged in professional home economics work may be interested in helping to develop a program suited to their needs and wishes, and to consider ways and means of developing greater interest in student home economics clubs.

University of Idaho. Katherine Jensen, head of the home economics department, was chairman of the menu committee for the national P.E.O. convention which met at Old Faithful Inn, Yellowstone National Park.

Helen Hunter, acting adviser of vocational home economics education, is studying at Iowa State College on a fellowship.

Vacation Camps. Some 9,000 women attended the four women's vacation camps in Idaho this summer. "The Home and the Family" was the theme of the educational, recreational, and inspirational programs. Discussions at the educational program centered around home values rather than improved agricultural or home economics practices, with special emphasis on various phases of home improvement, such as building plans, built-in features, and home landscaping. The national three-point wool program and its importance to Idaho was also stressed. The recreational program was developed from material and suggestions received at the institutes held earlier in the year by the National Recreation Association.

Camp reviews are now being held in outlying counties for women unable to attend the vacation camps.

Extension Service. Marion Hepworth, state home demonstration leader, attended the Western States Extension Conference at Fort Collins, Colorado.

Marjorie Eastman, extension clothing specialist, visited extension work in New York and Michigan during August.

ILLINOIS

Eastern Illinois State Teachers College. Mrs. Viela Russell, formerly of the University of Oklahoma, is the new head of the home economics department.

Eureka College. Sara Miner is the new teacher of foods and director of the activities of Lida's Wood at the College.

James Millikin University. Dr. Viola M. Bell, formerly of Iowa State College, has replaced Dr. Saidee E. Stark as head of the home economics department. Dr. Stark resigned in August to become head of the home economics division of the Federal Resettlement Administration in California.

University of Chicago. An all-day conference was held July 1 on "Education for Home and Family Life" and "The Place and Content of Courses in Family Relationships." Hazel Kyrk presided. Discussions were led by Dr. Lemo Dennis Rockwood of the A.H.E.A., Beulah Coon of the U. S. Office of Education, and Helen Koch of the University of Chicago.

A biweekly series of lectures was given throughout the summer by outstanding specialists from the different fields of home economics and representatives of organizations, movements, and projects in allied fields.

University of Illinois. Helen Underwood has been appointed assistant manager of the home economics cafeteria for the coming year.

Mrs. Pearl Janssen, who did her graduate work at the University of Wisconsin, has joined the staff of the University of Illinois to teach foods and dietetics.

Extension Service. Irene Crouch, who has been home adviser in McDonough County, resigned because of illness and is at her home at Cheneyville. She has been succeeded by Mildred Anderson.

Marie Dougherty of Evanston has been appointed home adviser in Bureau County.

Bernice Mitchell, formerly of Bureau County is now adviser in Hancock County, having replaced Alice McKinney, who has gone to Michigan as home furnishings specialist.

Mrs. Ruth C. Freeman has returned to the

university after a five-months leave of absence which she spent at the U. S. Bureau of Home Economics assisting in the analysis of cost-of-living data for rural families.

Mrs. Isabel Hitchcock McGovran has resigned as home furnishings specialist and is now living in Valdosta, Georgia, where her husband is employed.

Greenview. Luella Williams has given up her position as principal and home economics teacher to become field worker in adult home economics education in the Kansas State Department of Vocational Education.

Sandwich. Marie Holmes, a teacher of home economics at Sandwich for the past four years, resigned in June to teach textiles and clothing at the Manual Training High School at Indianapolis, Indiana.

IOWA

Vocational Homemaking Conference. The fifth annual state conference of vocational homemaking instructors and high school girls, called by Mary Farris, state supervisor, was held at Iowa State College from August 25 to 30. The conference was divided into two units. That for the high school girls met from August 25 to 27 with Mrs. W. Hagan Wellman of Cedar Falls as the principal speaker. The theme for the instructors' conference was "The Girl and Her Home in Relation to Curriculum Building," and speakers were: Florence Fallgatter of the U. S. Office of Education, Frances Zuill of the University of Iowa, Hazel Huston of the State University of Ohio, and members of the home economics staff of Iowa State College.

Iowa State College. An intensive training school for teachers and nurses in emergency nursery schools and for teachers of adult classes in the emergency education program in Iowa was conducted this fall by the state director of emergency education in cooperation with the members of the home economics staff. The nursery school served as a demonstration.

Dean Genevieve Fisher spent the summer traveling in the British Isles and the Scandinavian countries.

Hazel B. McKibben discussed consumer buying problems at the vocational homemaking conferences in Arizona and North Dakota. Mary S. Lyle spoke at the South Dakota conference on adult education.

Alice Dahlen of the home economics education staff was married on September 3 to Dr. Lee Rosebrook of Des Moines.

MAINE

University of Maine. Courses in child development, nursery school procedures, teaching junior high school clothing, teaching senior high school clothing, and advanced clothing selection and construction were offered by the home economics department during the summer session. The first two were taught by Lillian Gates of Temple University, who was assisted in the nursery school by Edith Bradley Hill of the home economics department at the University of Maine. The clothing courses were taught by Frances Wellbourne, head of the home economics department of the high school at Pittsfield, Illinois.

Leone Dakin assumed her duties on July 1 as state specialist in nutrition for the Extension Service. She replaced Therese Wood, now nutrition specialist for the 4-H Clubs in New York State.

Eleanor Haile has replaced Helene Heye as assistant professor of home management. Miss Heye is studying at the University of Iowa.

Farmington State Normal School. An impressive twilight memorial service was held for Mary Palmer on Baccalaureate Sunday, June 16. Because of Miss Palmer's devoted interest in the garden beside the practice house, the senior home economics girls dedicated it to her memory and placed in the archway a tablet reading "Mary Palmer's Garden." Principal Wilbur G. Mallett gave a sincere and glowing tribute to her life at Farmington. In the name of home economics alumnæ from 1924 to 1934, Margarette W. Lutz presented a sundial and garden bench, both bearing inscriptions in Miss Palmer's memory.

New Departments of Home Economics. A new home economics department opened in September in the newly completed large school building presented to Greenville by Mr. Louis Oakes. The building is unsurpassed in appointments and equipment by any in this section of the country. Drusilla Roderick has been appointed teacher of home economics.

New departments have also been developed this fall at Buckfield, Farmington, Pennell Institute, Gray, and Rockland.

MARYLAND

Maryland Home Economics Association. Features of the program for the annual fall meeting on October 25 were an address by Dr. Ivan McDougal of Goucher College on "Housing—Rural and City," an exhibit of the newest home economics literature, and in the evening a joint banquet with the Maryland Vocational Association.

Baltimore. After much hard work the new course of study for occupational (formerly prevocational) classes has been completed and will very soon be available in printed form.

MICHIGAN

Michigan Home Economics Association. The annual meeting was held on October 25 and 26 in Grand Rapids following the meeting of District 4. Dr. Garry C. Myers of Western Reserve University spoke at the state dinner meeting on "Learning to Be Likable." The Saturday morning discussions were planned to interest college and high school instructors, homemakers, institution managers, and student club members. Frances Swain, director of household arts in Chicago, addressed the student clubs at their banquet meeting.

District 1 of the Association held its annual meeting and luncheon on October 25 in Detroit when Mary Sweeny, nutrition expert at the Merrill-Palmer School, spoke on "Newer Phases of Nutrition."

Michigan State College. The management of the food service in the Union Building has been assigned to the division of home economics and will be used as laboratory work by the department of institution administration under Ethel Trump and Katherine Hart.

New members of the home economics staff are: Alberta Young and Dorothy Moore, foods and nutrition; Helen Simmonds, textiles and clothing; Mildred Jones, Ruth Godfrey, and Louise Clemens, institution administration. New members of the extension staff are: Alice McKinney, home furnishing specialist; Helen Noyes, home management specialist; Mary Thompson, clothing specialist.

Vocational Home Economics. The first camps for the two outstanding girls from each of the schools offering vocational home economics were held this summer at one of the Kellogg Foundation camps. Exceptional work in home projects was a major factor in the selection of the 88 girls who attended the camp for a week in June. A smaller camp was held in August for girls of the Upper Peninsula.

Home economics teachers in 85 towns were employed for a month this summer to supervise home projects, with the result that 5,000 such projects were carried on by about 2,800 girls.

Grand Rapids. Seven members of the home economics staff of the Grand Rapids city schools did graduate work at Columbia University and Michigan State College this summer.

MISSISSIPPI

Mississippi Home Economics Association. The Association will continue the plan started last year of having fall and spring meetings. The fall meeting, which is to be held in Jackson from November 8 to 9, will be devoted to planning, informational help, and business. The shorter spring meeting will have an educational program and will be arranged at a time convenient for those who wish also to attend the Mississippi Education Association and Mississippi Vocational Association meetings.

The Association's program for the year will stress: increased membership, JOURNAL subscriptions, observance of Home Economics Day, increase in scholarship fund, sponsoring of exhibits, and a census of all home economists in the state. The last will include information on work, training, and experience and may be used as a basis for eligibility to membership.

Student Clubs. Student club members cooperated last year in a study of shoes, and their findings are being analyzed by the home economics research office of the Mississippi Experiment Station.

Mississippi State College for Women. Three training courses for vocational home economics teachers were conducted during June and July. One was on methods of organizing and teaching adult classes, one on curriculum revision, and one on the use of dynamic symmetry in related art. Instructors were Mary Wilson of the college staff, Loyette Webb

of State Teachers College, Betty Finley of Memphis, Tennessee, and Rua Van Horn of the U. S. Office of Education, with the state supervisor serving as general chairman.

Parent-Teacher Association. Mrs. J. K. Pettingill, first vice-president of the National Congress of Parents and Teachers, conducted a short training course for 45 vocational home economics teachers at Columbus in June. Certificates were awarded to those taking the course, which was arranged by the state P.-T.A. president, Mrs. C. C. McDonald, and the state chairman of homemaking and rural service, M. Esther Rogers.

MONTANA

Montana State College. Edith Rhyne has resigned and is teaching at Oregon State College. She has been succeeded by Elizabeth Wiley.

The women's residence halls described in the January issue of the JOURNAL are nearing completion. Three of them are now leased to sororities, and three will be operated as open dormitories. Miriam Scholl, a graduate from the institutional management department of the University of Washington, is to be the director of food service in the new buildings.

Extension Service. Under funds from the new Bankhead-Jones act, Montana will add three home demonstration agents-at-large who will assist in developing home demonstration and 4-H club programs in counties without home demonstration agents.

Florence Michaelson, who has been assistant agent-at-large for the past 15 months, has recently been placed in Fergus County. Florence Johnson, who has been teaching at Kalispell, will succeed Julia Toothaker as home demonstration agent in Rosebud County.

Robina Wylder, home demonstration agent in Cascade County, successfully tried out the plan of training project leaders as well as officers at the fall meeting of the County Home Demonstration Council.

The cash awards made by the Montana Wool Growers' Association stimulated 4-H clothing girls to make a large number of very attractive, well-finished wool dresses which were displayed at the Inland Empire Fair in Billings.

Vocational Home Economics. The eighth annual state conference for vocational home economics was held from August 26 to 29. Edna Amidon of the U. S. Office of Education led the discussion on home management and consumer education. C. G. Manning, superintendent of schools at Lewistown, was chairman of a panel discussion of "Should the Home Economics Course Be Integrated within Itself and with Other Courses in the High School?" Teachers in the state will continue their committee work in home management and in improving their technic of test construction, this year's program for the latter concentrating on examination questions for the child development unit. The conference voted to continue the travel library, and members expressed interest in books which will give them a better understanding of the adolescent girl.

Student Clubs. A committee is to be appointed to make plans for a home economics exhibit at the Great Falls and Billings Fairs. Another committee will study the advisability of having an Activities Camp next summer for the girls who have done outstanding home project work.

Anne Greenfield of Helena, who is national secretary of the student clubs department of the A.H.E.A., is making plans to attend the meeting in Seattle next summer.

OUR CONTRIBUTORS

Beatrice Sawyer Rossell has been publicity assistant and editor of the *Bulletin* of the American Library Association since 1929. Before that she was in charge of publicity at the Public Library at Albany, New York.

Helen Inman Duff was appointed nutritionist on the staff of the Massachusetts Department of Public Health in 1934 to do special work on school lunches as a result of the survey made by the school lunch committee. She was formerly dietitian at the Heywood Memorial Hospital in Gardner, Massachusetts.

Florence Jones Vining, special assistant to the director of the field division of the Federal Housing Administration, directs the work of its women field representatives.

Judith C. Waller, educational director of the central division of the National Broadcasting Company, broadcasts the "Woman's Page of the Air." Before joining NBC she was vice-president and general manager of station WMAQ, Chicago. **Zelta Rodenwold** brought to her present position of director of women's programs of station KOAC at Corvallis, Oregon, a background of editorial experience with home economics organizations and publications in Oregon and Iowa. **Helen Crouch Douglass** was in charge of publications and press for four years at the New York State College of Home Economics at Cornell University before she became home economics radio writer for the U. S. Department of Agriculture.

Dorothy Wells has been on the staff of the National Board of the Y.W.C.A. since 1931 as consultant to local Y.W.C.A.'s on employment and vocational guidance. Formerly she was director of the employment bureau at the Central Branch Y.W.C.A. in New York City.

Treva E. Kauffman, state supervisor of home economics at the State Education Department in Albany, New York, since 1920, organized the emergency education homemaking program in New York City.

Dr. Robert G. Foster has been a member of the staff of the Merrill-Palmer School for four years. An earlier contribution from him appeared in the JOURNAL for June–July 1934.

Marion F. Breck has been state supervisor of home economics education in Delaware since 1926. Previously she was a teacher trainer at the University of West Virginia and a teacher of home economics in the Milwaukee public schools.

Virginia Schmidt was president both of the Mundelein Home Economics Club and of the Home Economics Clubs of Illinois when Mundelein College was hostess to the student delegates attending the Chicago meeting of the A.H.E.A. She is now student dietitian at Michael Reese Hospital, Chicago.

Letitia Walsh, in charge of teacher training at the Stout Institute, has been chairman of the publicity committee of the Wisconsin Home Economics Association for two years.

Margaret B. Hays is associate textile physicist at the U. S. Bureau of Home Economics, and **Dr. Ruth E. Elmquist** is associate textile chemist there. JOURNAL readers are indebted to the latter for assembling the abstracts on textiles and clothing which it publishes.

Ethel L. Phelps has been on the home economics staff at the University of Minnesota since 1915 and director of research in textiles and clothing since 1921. **Ethel R. Gorham** has been an instructor of textiles and clothing there for the past ten years.